

# **Structured Training Module**

## **On**

# **Audit Of Railways**

**Regional Training Institute, Kolkata**  
**Indian Audit and Accounts Department**  
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# Preface

## Structured Training Module on Audit of Railways

### Training Need:

Given the organizational complexity and procedural diversities in different Departments and units of the Indian Railways; and in order to equip Railway Audit offices to conduct audit with a systematized training document for continuous training of officers and staff working in Railway Audit, this Structured Training Module has been prepared.

### Aim:

The training will equip the participants with adequate knowledge of the various components of the functioning of the Indian Railways. It will thus enable the participants to familiarize with key areas of audit focus and enable them to conduct audit of the Railways efficiently and effectively.

### Objectives:

At the end of the training, the participants will

- i) Formulate an overall conception of the Indian Railways.
- ii) Know about the Budgetary System of the Indian Railways and acquire an understanding of the basic concepts of the Railway Budget.
- iii) Know the fundamental rules on Establishment and Provident Fund of the Indian Railways and acquire an understanding of the basic concepts of the Establishment and Provident Fund Rules.
- iv) Form an idea about the Accounting structures of the Indian Railways and the basic concepts of the Accounting system of the Indian Railways.
- v) Learn about the Traffic and Earnings of the Indian Railways and the concepts of an Audit of Traffic and Earnings of Indian Railways.
- vi) Learn about the construction procedures of the Indian Railways and form an idea of an Audit of the Construction Department of Indian Railways.
- vii) Learn about the functions of the Controller of Stores of Indian Railways, accounting procedures of Stores, its purchase procedures and custody and at the end of the session acquire basic concepts of the functions of the Stores department as a whole in the Indian Railways.

viii) Know about the functions of Railway Workshops, their classification, budget grants, accounting procedures, techniques of costing and inventory control and acquire knowledge of an Audit of Railway Workshops.

ix) Learn about the Signalling systems in the Indian Railways, safety aspects, maintenance of accounting of signalling and acquire basic concepts of Signalling systems of the railways, which will help them to focus on audit issues.

x) Acquire basic concepts of IT Audit and know about the IT Audit of Railways which will help them to focus on audit issues.

xi) Acquire basic concepts of Performance Audit in the Railways and know about processes of Performance Audit of Railways, which will help them to focus on audit issues.

xii) Understand the Duties and Powers of the Comptroller and Auditor General of India with reference to Railway Audit.

# Contents

**Page No.**

<b>1.</b>	<b>List of Abbreviations and Acronyms</b>	v
<b>2.</b>	<b>Sessions at a glance</b>	vi
<b>3.</b>	<b>Session 1 Introduction and Organisational Set-up of Indian Railways</b>	
	Instructor's Guide	2
	Print outs of PowerPoint slides	
	Participants' Note	3
<b>4.</b>	<b>Session 2 Audit of Railway Budget</b>	
	Instructor's Guide	16
	Print outs of PowerPoint slides	
	Participants' Note	17
<b>5.</b>	<b>Session 3 Audit of Railway Establishments</b>	
	Instructor's Guide	24
	Print outs of PowerPoint slides	
	Participants' Note	25
<b>6.</b>	<b>Session 4 Audit of Railway Accounts</b>	
	Instructor's Guide	44
	Print outs of PowerPoint slides	
	Participants' Note	45
<b>7.</b>	<b>Session 5 Audit of Railway Traffic and Earnings</b>	
	Instructor's Guide	70
	Print outs of PowerPoint slides	
	Participants' Note	71
<b>8.</b>	<b>Session 6 Audit of Railway Construction</b>	
	Instructor's Guide	100
	Print outs of PowerPoint slides	
	Participants' Note	101
<b>9.</b>	<b>Session 7 Audit of Railway Stores</b>	
	Instructor's Guide	142
	Print outs of PowerPoint slides	
	Participants' Note	143
<b>10.</b>	<b>Session 8 Audit of Railway Workshop</b>	
	Instructor's Guide	164
	Print outs of PowerPoint slides	
	Participants' Note	165
<b>11.</b>	<b>Session 9 Safety aspect and Signalling System in Indian Railways</b>	
	Instructor's Guide	198
	Print outs of PowerPoint slides	
	Participants' Note	199
<b>12.</b>	<b>Session 10 IT Audit</b>	
	Instructor's Guide	214
	Print outs of PowerPoint slides	
	Participants' Note	215

iii

<b>13.</b>	<b>Session 11 Performance Audit of Railways</b>	
	Instructor's Guide	248
	Print outs of PowerPoint slides	
	Participants' Note	249
<b>14.</b>	<b>Session 12 Duties and Powers of Audit. Issue of Inspection Reports and Draft Paragraphs.</b>	
	Instructor's Guide	276
	Print outs of PowerPoint slides	
	Participants' Note	277
<b>15.</b>	<b>List of References</b>	283

## List of Abbreviations and Acronyms

Sl. No.	Abbreviated Form	Full Form
1	RDSO	Research, Designs and Standards Organisation
2	GM	General Manager
3	DRM	Divisional Railway Manager
4	FA&CAO	Financial Advisor and Chief Accounts Officer
5	DRF	Depreciation Reserved Fund
6	DF	Development Fund
7	OLWR	Open-Line Works (Revenue)
8	LD	Liquidated Damages
9	CCM	Chief Commercial Manager
10	IRCA	Indian Railway Conference Association
11	COM	Chief Operating Manager
12	HOR	High Officials Requisition
13	CPT	Computerised Printed Ticket
14	CONCERT	Country wide net work of Enhanced Reservation and ticketing.
15	PRS	Passenger Reservation System

Sl. No.	Abbreviated Form	Full Form
16	RAM	Railway Audit Manual
17	E	Railway Code for the Engineering Department
18	COS	Chief Controller of Stores
19	CME	Chief Mechanical Engineer
20	DCME	Deputy Chief Mechanical Engineer
21	CWE	Chief Workshop Engineer
22	WMS	Workshop Manufacturing Suspense
23	WGR	Workshop General Register
24	POH	Periodical Overhaul
25	ABS	Automatic Block Signalling
26	CSTE	Chief Signal & Telecom Engineer
27	DSTE	Dy. Chief Signal & Telecom Engineer
28	IT	Information Technology
29	EDP	Electronic Data Processing
30	LAN	Local Area Network
31	WAN	Wide Area Network

## Regional Training Institute, Kolkata

### Training Module on Audit of Railways

**Training Objective:** Familiarisation with the conceptual and organisational frameworks of the Railways, their evolution and importance in the developmental process vis-a vis enabling the participants to

- (i) understand the Railways accounting system;
- (ii) form objective assessment of the working of the Railways; and
- (iii) derive audit conclusions

**Training Method:** Interactive lectures, PowerPoint Presentations and exercises

### Sessions at a glance

#### Day 1

Session		Time Required	Topic
1	Forenoon Session	150 mins	Introduction and Organisational Set-up of Indian Railways.
			Do
2	Afternoon Session	150 mins	Audit of Railway Budget.
			Do

#### Day 2

Session		Time Required	Topic
3	Forenoon Session	150 mins	Audit of Railway Establishments.
			Do
4	Afternoon Session	150 mins	Audit of Railway Accounts.
			Do

#### Day 3

Session		Time Required	Topic
4	Forenoon Session	150 mins	Audit of Railway Accounts contd.
			Do
5	Afternoon Session	150 mins	Audit of Railway Traffic and Earnings.
			Do





**Day 4**

Session		Time Required	Topic
6	Forenoon Session	150 mins	Audit of Railway Construction.
			Do
7	Afternoon Session	150 mins	Audit of Railway Stores.
			Do

**Day 5**

Session		Time Required	Topic
8	Forenoon Session	150 mins	Audit of Railway Workshop.
			Do
9	Afternoon Session	150 mins	Safety aspect and Signaling System in Indian Railways.
			Do

**Day 6**

Session		Time Required	Topic
10	Forenoon Session	150 mins	IT Audit.
			Do
11	Afternoon Session	150 mins	Performance Audit of Railways.
			Do

**Day 7**

Session		Time Required	Topic
12	Forenoon Session	150 mins	Duties and Powers of Audit. Issue of Inspection Report, Draft Paragraphs.
			Do
	Afternoon Session	150 mins	Test
			Valediction

# **Session: 1**

## **Introduction and Organisational Set-up of Indian Railways**

<b>Session Title: Introduction and Organisational Set-up of Indian Railways</b>		Session Guide	
<b>Instructor's Guide</b>		Reference	Participants' Response
<b>Session Overview</b>			
<b>Welcome</b> participants to the session and remind them that their active participation is critical for the success of each session.		Lecture	
<b>Learning Objective</b>			
<b>Inform:</b> Given the inputs of overall views of Indian Railways through group discussion, lecture and PowerPoint slide show, the participants will, at the end of the session, be able to grasp the basic concepts of the Indian Railways which will help them to focus on audit issues in the practical work environment.		Lecture	
<b>Basic Concepts</b>			
<b>Discuss:</b> <ul style="list-style-type: none"> <li>● Introduction on Railways—Historical Perspectives, Electric locomotives revolutionise urban transport; Dieselisation.</li> <li>● History of rail transport in India.</li> <li>● Salient Features of Indian Railways.</li> <li>● Organisational structure of Indian Railways.</li> <li>● Rail budget and finances.</li> </ul>		Lecture with Power Point Slide Show <b>Session 1 INTRODUCTION</b>	
<b>Summarise:</b>			
<b>Distribute</b> Participants' Note <b>Tell</b> the participants that during the session, we discussed historical perspectives, organisational structures and salient features of the Indian Railway as well as its budget and finances. <b>Invite</b> questions on themes discussed. If participants have any doubts/clarifications about themes, clarify the same. Answer participants' queries. <b>Thank</b> the participants and bring the session to a close.		Session 1 Participants' Note	

**Training Method:** Interactive Lecture and Power Point Slide Show.

**Materials Required:** Power Point Slides, Projector, White Board, Marker Pen and Participants' Note.

## Session Title: Introduction and Organisational Set-up of Indian Railways

### Session Overview

- Rail transport refers to the land transport of passengers and goods along railways or railroads. A railway (or railroad) track consists of two parallel rail tracks, formerly of iron and now of steel, generally mounted upon cross beams termed "sleepers" or "railroad ties" of timber, concrete or steel. The underlying support maintains the rails at a fixed distance (gauge) apart. The rails and perpendicular beams are usually then placed on a foundation made of concrete or compressed earth and gravel in a bed of ballast to prevent the track from buckling (bending out of its original configuration) as the ground settles over time beneath and under the weight of the vehicles passing above. Usually vehicles running on the rails are arranged in a train (a series of individual powered or empowered vehicles linked together). These vehicles (referred to, in general, as cars, carriages or wagons) move with much less friction than do rubber tires on a paved road, and the locomotive that pulls the train tends to use energy far more efficiently as a result.
- Rail transport is an energy-efficient and capital-intensive means of mechanized land transport. Rails provide very smooth yet hard surfaces on which the wheels of the train may roll with a minimum of friction. A typical wagon can hold up to 125 tons of freight on two four-wheel bogies. Fully loaded, the contact between each wheel and the rail is the area of about one U.S. ten-cent piece. This can save energy compared with other forms of transportation, such as road transport which depends on rubber tires on pavement. Trains also have a small frontal area in relation to the load they carry, which cuts down on air resistance and thus energy usage. Under the right circumstances, a train needs 50-70% less energy to transport a given tonnage of freight (or given number of passengers), than does road transport. Furthermore, the rails and sleepers distribute the weight of the train evenly, allowing significantly greater loads per axle / wheel than

in road transport, leading to less wear and tear on the permanent way.

- Rail transport makes highly efficient use of space: a double-track rail line can carry more passengers or freight in a given amount of time than a four-lane road.
- As a result, rail transport is a major form of public transport in many countries. Many millions use trains as regular transport in the countries in Asia like India, South Korea, Japan, China, and in European countries. However, outside the Northeast Corridor, rail transport as a form of public transit in the United States is not so popular. Few major US cities other than New York, Chicago, Boston and Philadelphia can lay claim to any significant use of local rail-based passenger transport; Amtrak is the only nationwide passenger rail system in the U.S.A.. In Canada, the government-owned VIA Rail system provides a limited level of intercity service at prices that are usually higher than air travel or bus service. However, Toronto, Montreal and Vancouver operate rapid transit and/or light rail services that receive millions of riders a year.

### Historical Perspective of Railways

- The Railways, the greatest and most singularly popular means of public transport, have had a long and chequered history. The origin of the concept of rail transport is steeped in the grand old ancient age. The Diolkos, a 6-km long track, used to transport boats across the Corinth isthmus in Greece in the 6th century BC. Trucks pushed by slaves ran in grooves in a limestone track. The Diolkos ran for over 1300 years, until 900 AD.
- The first horse-drawn wagonways appeared in Greece, Malta, and parts of the Roman Empire at least 2000 years ago, using cut-stone track.
- They began reappearing in Europe from around 1550, usually operating with wooden track. The first railways in Great Britain (also known as wagonways) were built in the early 17th century, mainly for transporting coal from the mine to the water side where it could be loaded on to a boat. These had wooden rails and flanged wheels, as on a modern railway. However, the rails were liable to wear out and had to be replaced frequently. In 1768, the Coalbrookdale Company laid cast iron plates on

such wooden rails to provide a more durable bearing surface.

- In the late 18th century iron rails began to appear: British civil engineer William Jessop designed edge rails (which had the flange on the rail, used with plain wheels) for use on a scheme from Loughborough, Leicestershire in 1789 and in 1790 was one of the partners who established an iron-works at Butterley, Derbyshire to produce rails (and other goods). In 1802, Jessop opened the Surrey Iron Railway in south London - arguably the world's first public railway, albeit horse-drawn.
- The first steam locomotive to operate on rails was built by Richard Trevithick, and was tried out in 1804 at Merthyr Tydfil in Wales. This was not a success, partly because the engine was so heavy that the rails broke under it. In 1806 a horse-drawn railway was built between Swansea and Mumbles. In 1807 this railway started carrying fare-paying passengers - the first in the world to do so.
- In 1811 John Blenkinsop designed the first successful and practical railway locomotive. He patented a system of moving coals by a rack railway worked by a steam locomotive, and a line was built connecting the Middleton Colliery to Leeds. The locomotive was built by Matthew Murray of Fenton, Murray and Wood. The Middleton Railway was the first railway to successfully use steam locomotives on a commercial basis.
- Blenkinsop's engine had double-acting cylinders and, unlike the Trevithick pattern, no flywheel. The cylinders drove a geared wheel which engaged under the engine with the rack. This design was quickly superseded following the discovery of railroad traction properties by George Stephenson during construction of the Stockton and Darlington Railway.
- In 1812 Oliver Evans, a United States engineer and inventor, published his vision of what steam railways could become, with cities and towns linked by a network of long distance railways plied by speedy locomotives, greatly reducing the time required for personal travel and for transport of goods. Evans specified that there should be separate sets of parallel tracks for trains going in different directions.
- In 1813, George Stephenson persuaded the manager of the colliery where he worked to

allow him to build a steam-powered machine. He built the Blucher, the first successful flanged-wheel adhesion locomotive. The flanges enabled the trains to run on top of the rails instead of in sunken tracks. This greatly simplified construction of switches and rails, and opened the way to the modern railroad.

- The Stockton and Darlington Railway Company's first line was opened on September 27, 1825. Stephenson himself drove Locomotion No 1, which drew large crowds of spectators.
- The success of the Stockton and Darlington encouraged the rich investors of the rapidly industrialising North West of England to embark upon a project to link the rich cotton manufacturing town of Manchester with the thriving port of Liverpool via what was to become the world's first passenger railway. Following a widely reported competition in 1829 called the Rain hill Trials to find the most suitable steam engine to haul the trains, Stephenson's Rocket was narrowly selected for the job of pulling the carriages along the Liverpool and Manchester Railway which opened in 1830, starting a transport revolution which spread around the globe.
- Railways quickly became essential to the swift movement of goods and labour that was needed for industrialization. In the beginning, canals were in competition with the railroads, but the railroads quickly gained ground as steam and rail technology improved, and railroads were built in places where canals were not practical.
- By the 1850s, many steam-powered railways had reached the fringes of built-up London. But the new lines were not permitted to demolish enough property to penetrate the City or the West End, so passengers had to disembark at Paddington, Euston, Kings Cross, Fenchurch Street, Charing Cross, Waterloo or Victoria and then make their own way via hackney carriage or on foot into the centre, thereby massively increasing congestion in the city. A Metropolitan Railway was built under the ground to connect several of these separate railway terminals, and thus became the world's first "Metro."
- Thus, the technological development of the locomotives and the railways which started with Stephenson's famous Rocket steam locomotive proved the viability of rail transport. Railways

soon spread throughout the United Kingdom and through the world, and became the dominant means of land transport for nearly a century, until the invention of aircraft and automobiles, which prompted a gradual decline in railways.

### **Electric Locomotives Revolutionise Urban Transport**

- Prior to the development of electric railways, most overland transport aside from the railways had consisted primarily of horse powered vehicles. Placing a horse car on rails had enabled a horse to move twice as many people, and so street railways were born. After many decades of satisfactory performance, the steam engines were to give way to more modern locomotives. The year 1881 saw the birth of the first electric Railway run by a German Engineer Werner Van Siemens using both the rails to carry the current. Finding this a little too dangerous, Siemens soon adopted the overhead electric wires. Electric locomotives today run on Rail roads in many countries.
- In January 1888, Richmond, Virginia served as a proving ground for electric railways as Frank Sprague built the first working electric streetcar system there. By the 1890s, electric power became practical and more widespread, allowing extensive underground railways. Large cities such as London, New York, and Paris built subway systems. When electric propulsion became practical, most street railways were electrified. These then became known as "streetcars," "trolleys," "trams" and "Strassenbahn."
- In many countries, these electric street railways grew beyond the metropolitan areas to connect with other urban centers. In the USA, "Electric Interurban" railroad networks connected most urban areas in the states of Illinois, Indiana, Ohio, Pennsylvania and New York. In Southern California, the Pacific Electric Railway connected most cities in Los Angeles and Orange Counties, and the Inland Empire. There were similar systems in Europe. One of the more notable rail systems connected every town and city in Belgium.
- The remnants of these systems still exist, and in many places they have been modernized to become part of the urban "rapid transit" system in their respective areas.

### **Dieselisation**

- Diesel locomotives are electric locomotives with an on-board generator powered by a Diesel engine. The first Diesel locomotives were low-powered machines used in switching yards. Diesel and electric locomotives are cleaner, more efficient, and require less maintenance than steam locomotives. They also required less specialized skills in operation and maintenance and their introduction diminished the power of railway unions in the USA (one of the earliest countries to adopt Diesel power). By the 1950s, Diesel and electric power had replaced steam power on most of the world's railroads.
- Dieselisation is generally used in the context of rail transportation to refer to the replacement of the steam locomotive with the diesel-electric locomotive, (often referred to as a "diesel locomotive",) a process which began in the 1930s and is now substantially complete worldwide; China is the only major railroading nation to still use steam haulage in any major way, and the process of dieselisation is well underway there as well.
- In contrast to dieselisation, electrification is not perceived as generally desirable in many circumstances in the industry, because it only sometimes produces savings due to the high initial capital cost of the process.
- Dieselisation took place largely because of the reduction in operating costs it allowed. Steam locomotives require large pools of labour to clean, load, maintain and run. They also require extensive service, coaling and watering facilities. Diesel locomotives require significantly less time and labour to operate and maintain.
- After the Second World War inflation dramatically increased labour costs in the Western World, making steam an increasingly costly form of motive power. At the same time, the war had forced improvements in internal combustion engine technology that made diesel locomotives cheaper and more powerful. The post war world also re-aligned the business and financial markets, as did world geo-politics.
- In the 20th century, highways and air travel replaced railroads for most long-distance passenger travel in the United States, but railroads remain important for hauling freight in the United States, and for passenger transport in many other countries.

## North America

- In North America, railroads looked to cut costs in the face of stiff competition from trucks, planes and automobiles. Railroads in America at this time also had an image problem, viewed as archaic, a fact that was re-inforced in the war when retired equipment was pressed into service. This left a lasting memory for millions of service people delayed for days in uncomfortable cars in obscure sidings. Size also became an issue. American steam engines became so big in the 1940's that the cylinder and boiler sizes were pushing the limits that the loading gauge would allow. Fireboxes became so big that firing them became an almost impossible job without mechanical stokers. Diesels, to the contrary, were scaleable. With multiple power units and slave locomotives, very long trains of up to 2 miles in length were possible, exploiting economies of scale. Diesels had a greater running capacity, before needing servicing, so small division points were closed.

- Diesels slowly gained the advantage. Two ways they held the field was that diesels could be driven by one person, with no need of a fireman to shovel coal. Also, diesels use less fuel when idle; their fuel efficiency is much higher. Diesels can be parked running for days, and left unattended, where steam engines cannot, and diesels can pro-rate their fuel usage to the length of trains, another thing a steam engine cannot do.

- Of course, steam haulage also had its advantages, the degree of applicability of which varied. Steam engines were cheaper and easier to maintain, particularly in developing nations.

## Europe

- Britain held out a decade, after a less than successful introduction of the flagship diesels--the Napier Deltic. Australia and Germany kept steam until the 1970's.

## Latin America and Asia

- Latin America had their steam fleets working until the late 1960's and 1970's. Some nations, those with less oil reserves, such as India, China and South Africa used steam until the 1980's and 1990's. Russia or the Soviet Union electrified. Asian nations used steam until the 1970's when those nations modernised.

- The diesel engine was invented in the year 1893, by a young German Engineer, called Rudolf

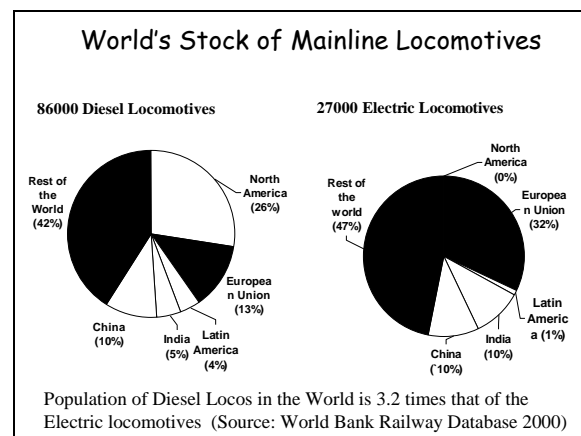
Diesel. But it was only nineteen years later, that the first Diesel locomotive came into existence.

- Since then, diesel traction has grown from strength to strength. Over 89,000 Diesel locomotives have been built in the world so far, the General Motors, USA alone contributing to as many as 56,000 Locomotives.

## World Railways – Status of Electrification

Railways	Percentage Electrified
USA	0.9%
Canada	0.1%
Australia	9.6%
China	15.6%
France	44%
India (BG)	44%
Italy	59%
Sweden	59%
Austria	29%
Amtrack (USA)	100%

*Source: RailBusiness Report, 1999*



## History of Rail Transport in India

The Indian Railways have had a chequered history. A plan for a rail system in India was first put forward in 1832, but no further steps were taken for more than a decade. In 1844, the Governor-General of India Lord Hardinge allowed private entrepreneurs to set-up a rail system in India. Two new railway companies were created and the East India Company was asked to assist them. Interest from investors in the UK led to the rapid creation of a rail system over the next few years. The first train in India



became operational on 1851-12-22, and was used for the hauling of construction material in Roorkee. A year and a half later, on 1853-04-16, the first passenger train service was inaugurated between Bori Bunder, Bombay and Thana. Covering a distance of 34 km (21 miles), it formally heralded the birth of railways in India.

The British government encouraged new railway companies backed by private investors under a scheme that would guarantee an annual return of five percent during the initial years of operation. Once established, the company would be transferred to the government, with the original company retaining operational control. The route mileage of this network was about 14,500 km (9,000 miles) by 1880, mostly radiating inward from the three major port cities of Bombay, Madras and Kolkata. By 1895, India had started building its own locomotives, and in 1896 sent engineers and locomotives to help build the Uganda Railway.

Soon various independent kingdoms built their own rail systems and the network spread to the regions that became the modern-day states of Assam, Rajasthan and Andhra Pradesh. A Railway Board was constituted in 1901, but decision-making power was retained by the Viceroy, Lord Curzon. The Railway Board operated under aegis of the Department of Commerce and Industry and had three members: a government railway official serving as chairman, a railway manager from England and an agent of one of the company railways. For the first time in its history, the Railways began to make a tidy profit. In 1907, almost all the rail companies were taken over by the government.

The following year, the first electric locomotive appeared. With the arrival of the First World War, the railways were used to meet the needs of the British outside India. By the end of the First World War, the railways had suffered immensely and were in a poor state. The government took over the management of the

Railways and removed the link between the financing of the Railways and other governmental revenues in 1920, a practice that continues to date with a separate railway budget.

The Second World War severely crippled the railways as trains were diverted to the Middle East, and the railway workshops were converted into munitions workshops. At the time of independence in 1947, a large portion of the railways went to the then newly formed Pakistan. A total of forty-two separate railway systems, including thirty-two lines owned by the former Indian princely states, were amalgamated as a single unit which was christened as the Indian Railways.

The existing rail networks were abandoned in favour of zones in 1951 and a total of six zones came into being in 1952. As the economy of India improved, almost all railway production units were indigenised. By 1985, steam locomotives were phased out in favour of diesel and electric locomotives. The entire railway reservation system was streamlined with computerisation in 1995.

Railways were first introduced to India in 1853. By 1947, the year of India's independence, there were forty-two rail systems. In 1951 the systems were nationalised as one unit, becoming one of the largest networks in the world. Indian Railways operates both long distance and suburban rail systems.

Indian Railways (IR) is the state-owned railway company of India. Indian Railways has a monopoly on the country's rail transport. It is also one of the largest and busiest rail networks in the world, transporting just under five billion passengers and almost 350 million tonnes of freight annually. IR is the world's largest commercial or utility employer, with more than 1.6 million employees.

The railways traverse through the length and width of the country; the routes cover a total

length of 63,372 km comprising broad gauge (48,574 kms), meter gauge (11,834 kms) and narrow gauge (2,924 kms). As of 2005 IR owns a total of 2,07,176 wagons, 44,090 coaches and 8,025 locomotives and run a total of 14,244 trains daily, including about 8,702 passenger trains. They carry 666.51 million tons of freight and about 5832.39 million passengers covering 6,856 numbers of stations daily.

### Salient Features of Indian Railways

- India is a land of diverse culture and Indian Railways play a key role in not only meeting the transport needs of the country, but also in binding together dispersed areas and promoting national integration. Truly, Indian Railways have emerged as the sinews of the Indian economy and have reached out to bring together the great Indian family.
- Indian Railways have been the prime movers to the nation and have the distinction of being one of the largest railway systems in the world under a single management. Railways being the more energy efficient mode of transport are ideally suited for movement of bulk commodities and for long distance travel. As compared to road transport, the railways have a number of intrinsic advantages. Railways are five to six times more energy efficient, four times more efficient in land use and significantly superior from the standpoints or environment impact and safety. Indian Railways, therefore, rightly occupy pride of place in the growth and development of the nation.
- The Indian Railway system is managed through zones and operating divisions. There are also six production units engaged in manufacturing rolling stock, wheels and axles and other ancillary components to meet Railways' requirements.
- Research, Designs and Standards Organisation (RDSO) is the sole research and development wing of Indian Railways, functioning as the technical adviser and consultant to the Ministry, Zonal Railways and

Production Units. RDSO has been reorganized with effect from 1.1.2003 by elevating its status from 'Attached Office' to 'Zonal Railway' to give it greater flexibility and a boost to the research and development activities.

- The formation of policy and overall control of the railways is vested in Railway Board comprising the Chairman, Financial Commissioner and other functional Members for Traffic, Engineering, Mechanical, Electrical and Staff matters.
- As per the Separation Convention, 1924, the Railway Budget is presented to the Parliament ahead of the General Budget. Though the Railway Budget is separately presented to the Parliament, the figures relating to the receipt and expenditure of the Railways are also shown in the General Budget, since the receipts and expenditure of the Railways are a part and parcel of the total receipts and expenditure of the Government of India.

### Organisational Structure

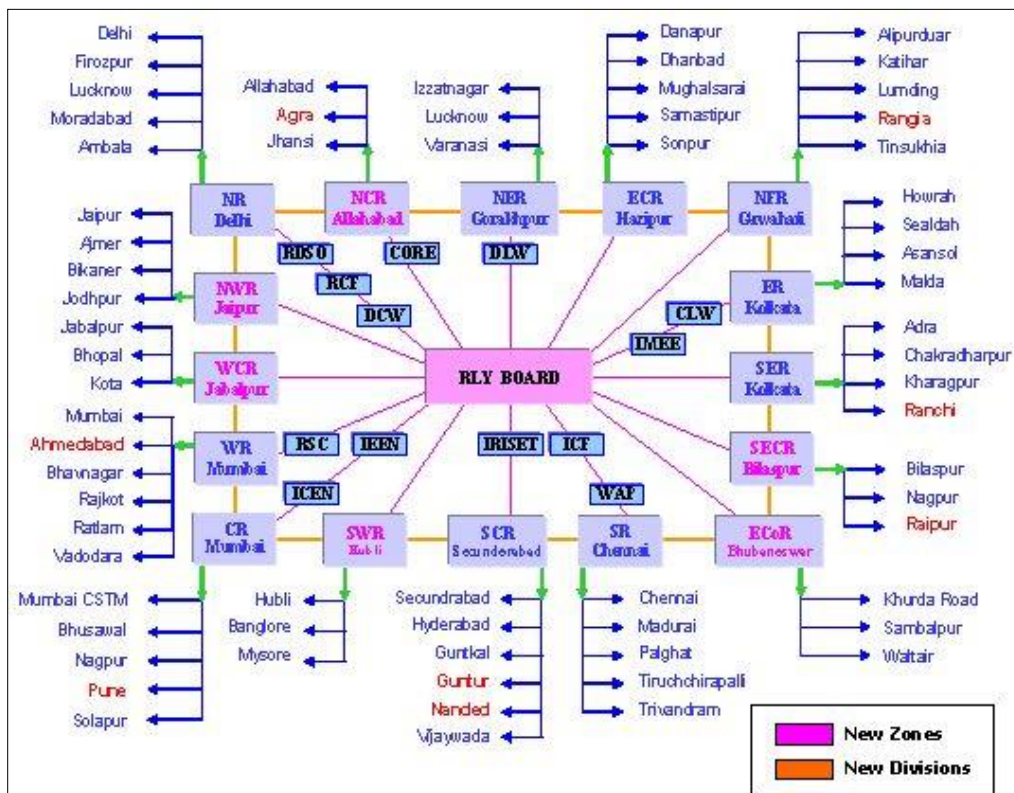
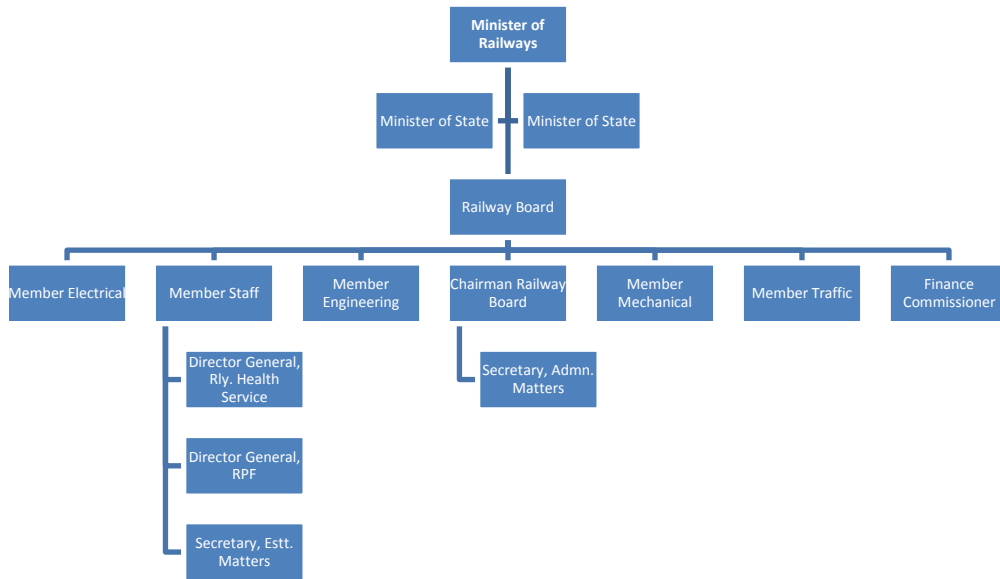


The Headquarters of the Indian Railways is located in New Delhi.

Indian Railways is a publicly-owned company controlled by the Government of India, via the Ministry of Railways. The Railway Board, which has six members and a chairman, reporting to the Ministry for functioning of the Railways.

An Organisational Structure of the Indian Railways is shown in the next page.

**Organisational Structure of Indian Railways**



For administrative purposes, Indian Railways is divided into sixteen zones:

No.	Name	Abbr.	Headquarters	Date established
1.	<a href="#">Northern Railway</a>	NR	Delhi	April 14, 1952
2.	<a href="#">North Eastern Railway</a>	NER	Gorakhpur	1952
3.	<a href="#">Northeast Frontier Railway</a>	NFR	Maligaon(Guwahati)	1958
4.	<a href="#">Eastern Railway</a>	ER	Kolkata	
5.	<a href="#">South Eastern Railway</a>	SER	Kolkata	
6.	<a href="#">South Central Railway</a>	SCR	Secunderabad	October 2, 1966
7.	Southern Railway	SR	Chennai	April 14, 1951
8.	Central Railway	CR	Mumbai	November 5, 1951
9.	Western Railway	WR	Mumbai	November 5, 1951
10.	South Western Railway	SWR	Hubli	
11.	North Western Railway	NWR	Jaipur	
12.	West Central Railway	WCR	Jabalpur	April 2003
13.	North Central Railway	NCR	Allahabad	
14.	South East Central Railway	SECR	Bilaspur, CG	
15.	East Coast Railway	ECoR	Bhubaneswar	
16.	East Central Railway	ECR	Hajipur	

In addition to the above 16 zones, Konkan Railway (KR) is constituted as a separately incorporated railway, with its Headquarters at Belapur CBD (Navi Mumbai), although it still comes under the control of the Railway Ministry and the Railway Board.

The Kolkata Metro is owned and operated by Indian Railways, but is not a part of any of the zones. It is administratively considered to have the status of a zonal railway.

Each of the sixteen zones is headed by a General Manager (GM) who reports directly to the Railway Board. The zones are further divided into divisions under the control of Divisional Railway Managers (DRM). The divisional officers of engineering, mechanical, electrical, signal & telecommunication, accounts, personnel, operating, commercial and safety branches report to the respective Divisional Manager and are in charge of operation and maintenance of assets. Further down the hierarchy tree are the Station Masters who control individual stations and the train movement through the track territory under their stations' administration. Besides, there are six production units (PUs) each headed by a General Manager (GM), who

also report directly to the Railway Board. These production units are:

1. Chittaranjan Locomotive Works: Chittaranjan
2. Diesel Locomotive Works Varanasi
3. Integral Coach Factory; Perambur (Near Chennai)
4. Rail Coach Factory: Kapurthala
5. Rail Wheel Factory: Yelahanka (Near Bangalore)
6. Diesel Modernisation Works: Patiala
  - In addition to this, the Central Organisation for Railway Electrification (CORE) is also headed by a GM. This is located at Allahabad. This organisation undertakes electrification projects of Indian Railways and monitors the progress of various electrification projects all over the country.
  - Apart from these zones and production units, a number of Public Sector Undertakings (PSU) are under the administrative control of the ministry of railways. These PSU's are:
    1. Indian Railways Catering and Tourism Corporation
    2. Konkan Railway Corporation
    3. Indian Railway Finance Corporation
    4. Mumbai Rail Vikas Corporation

5. Railtel Corporation of India – Telecommunication Networks
6. RITES Ltd. – Consulting Division of Indian Railways
7. IRCON International Ltd. – Construction Division
8. Rail Vikas Nigam Limited
9. Container Corporation
10. Railway Officers Training Institute
11. Zonal Training Schools (PTS)

Centre for Railway Information Systems is an autonomous society under Railway Board, which is responsible for developing the major software required by Indian Railways for its operations.

## Rail Budget and Finances

- The Railway Budget deals with the induction and improvement of existing trains and routes, the modernisation and most importantly the tariff for freight and passenger travel. The Parliament discusses the policies and allocations proposed in the budget. The budget needs to be passed by a simple majority in the Lok Sabha (India's Lower House). The comments of the Rajya Sabha (Upper House) are non-binding. Indian Railways are subject to the same audit control as other government revenue and expenditures. Based on the anticipated traffic and the projected tariff, the level of resources required for railway's capital and revenue expenditure is worked out. While the revenue expenditure is met entirely by railways itself, the shortfall in the capital (plan) expenditure is met partly from borrowings (raised by Indian Railway Finance Corporation) and the rest from Budgetary support from the Central Government. Indian Railways pays dividend to the Central Government for the capital invested by the Central Government.
- As per the Separation Convention, 1924, the Railway Budget is presented to the Parliament by

the Union Railway Minister, two days prior to the General Budget, usually around 26 February. Though the Railway Budget is separately presented to the Parliament, the figures relating to the receipt and expenditure of the Railways are also shown in the General Budget, since they are a part and parcel of the total receipts and expenditure of the Government of India. This document serves as a balance sheet of operations of the Railways during the previous year and lists out plans for expansion for the current year.

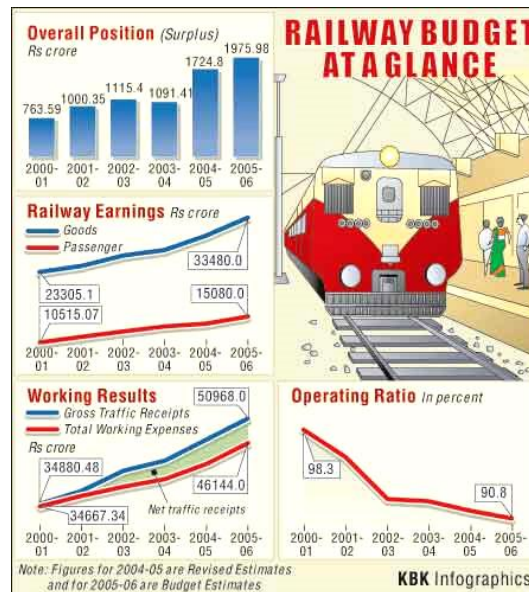
- The formation of policy and overall control of the railways is vested in Railway Board comprising the Chairman, Financial Commissioner and other functional Members for Traffic, Engineering, Mechanical, Electrical and Staff matters. As per the 2006 budget, Indian Railways earned Rs.54,600crores. Freight earnings increased by 10% from Rs.30,450cr. in the previous year. Passenger earnings, other coaching earnings and sundry other earnings increased by 7%, 19% and 56% respectively over previous year. Its year end fund balance is expected to stand at Rs.11,280 cr. Around 20% of the passenger revenue is earned from the upper class segments of the passenger segment (the air-conditioned classes). The overall passenger traffic grew 7.5% in the previous year. In the first two months of India's fiscal year 2005-06 (April and May), the Railways registered a 10% growth in passenger traffic, and a 12% in passenger earnings.
- A new concern faced by Indian Railways is competition from low cost airlines that has recently made its début in India. In a cost cutting move, the Railways plans to minimise unwanted cessations, and scrap unpopular routes.
- The following two diagrams will show the key figures of the Railway budget and the Railway budget at a glance.

### Railway Budget - Key figures

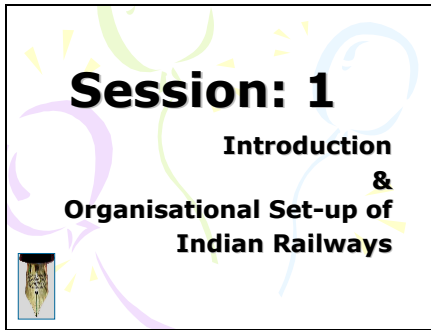
RAILWAY BUDGET- Key Figures				
Rs crore	Actuals 2003-04	Budget 2004-05	Revised 2004-05	Budget 2005-06
Gross Traffic Receipts	42904.94	44902.00	46785.00	50968.00
Total Working Expenses	39482.21	41417.00	42462.00	46144.00
Net Railway Revenue	4478.49	4478.24	5300.88	5913.98
Dividend Payable to General Revenues	3087.08	3305.24	3276.08	3638.00
Operating Ratio	92.1%	92.6%	91.2%	90.8%
<b>Overall Surplus</b>	<b>1091.41</b>	<b>873.00</b>	<b>1724.80</b>	<b>1975.98</b>

Source: Railway Budget 2005-06 documents KBK Infographics

### Railway Budget at a glance



Slide 1




# Session: 1

## Introduction & Organisational Set-up of Indian Railways

Training Module on Audit of  
Railways; Session: 1

Slide 4

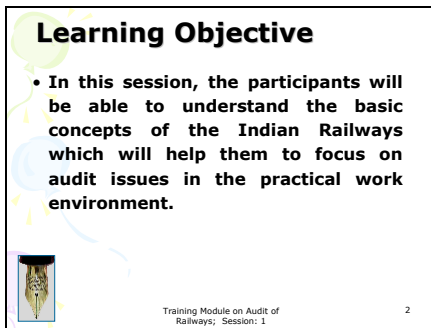


### Historical Perspective of Railways

- In Greece in the 6th century BC the Diolkos, a 6-km long stretch, used to transport boats across the Corinth isthmus.
- The first horse-drawn wagonways appeared in Greece, Malta, and parts of the Roman Empire 2000 years ago, using cut-stone track.

Training Module on Audit of  
Railways; Session: 1

Slide 2

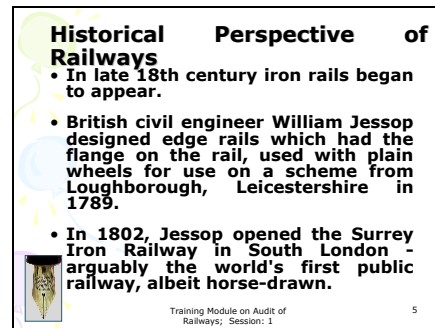


### Learning Objective

- In this session, the participants will be able to understand the basic concepts of the Indian Railways which will help them to focus on audit issues in the practical work environment.

Training Module on Audit of  
Railways; Session: 1

Slide 5

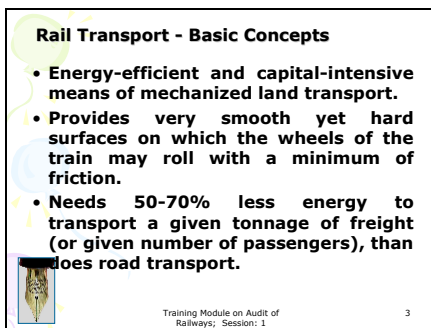


### Historical Perspective of Railways

- In late 18th century iron rails began to appear.
- British civil engineer William Jessop designed edge rails which had the flange on the rail, used with plain wheels for use on a scheme from Loughborough, Leicestershire in 1789.
- In 1802, Jessop opened the Surrey Iron Railway in South London - arguably the world's first public railway, albeit horse-drawn.

Training Module on Audit of  
Railways; Session: 1

Slide 3

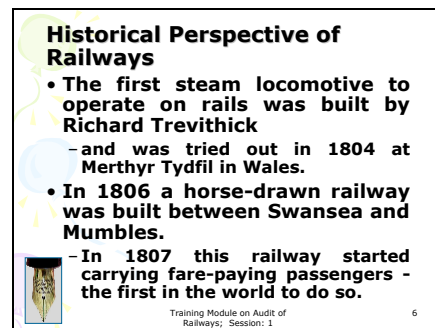


### Rail Transport - Basic Concepts

- Energy-efficient and capital-intensive means of mechanized land transport.
- Provides very smooth yet hard surfaces on which the wheels of the train may roll with a minimum of friction.
- Needs 50-70% less energy to transport a given tonnage of freight (or given number of passengers), than does road transport.

Training Module on Audit of  
Railways; Session: 1

Slide 6



### Historical Perspective of Railways


- The first steam locomotive to operate on rails was built by Richard Trevithick
  - and was tried out in 1804 at Merthyr Tydfil in Wales.
- In 1806 a horse-drawn railway was built between Swansea and Mumbles.
  - In 1807 this railway started carrying fare-paying passengers - the first in the world to do so.

Training Module on Audit of  
Railways; Session: 1

Slide 7

**Historical Perspective of Railways**

- By the 1850s, many steam-powered railways had reached the fringes of built-up London.
- A Metropolitan Railway was built under the ground to connect several of these separate railway terminals, and thus became the world's first "Metro."




Training Module on Audit of Railways; Session: 1 7

Slide 10

**Dieselisation**

- Diesel locomotives are electric locomotives with an on-board generator powered by a Diesel engine.
- The first Diesel locomotives were low-powered machines used in switching yards.
- By the 1950s, Diesel and electric power had replaced steam power on most of the world's railroads.




Training Module on Audit of Railways; Session: 1 10

Slide 8

**Electric Locomotives Revolutionise Urban Transport**

- The year 1881 saw the birth of the first electric Railway run by a German Engineer Werner Van Siemens using both the rails to carry the current.
- In January 1888, Richmond, Virginia served as a proving ground for electric railways as Frank Sprague built the first working electric streetcar system there.




Training Module on Audit of Railways; Session: 1 8

Slide 11

**History of Rail Transport in India**

- A plan for a rail system in India was first put forward in 1832,
- In 1844, the Governor-General of India Lord Hardinge allowed private entrepreneurs to set up a rail system in India.




Training Module on Audit of Railways; Session: 1 11

Slide 9

**Electric Locomotives Revolutionise Urban Transport**

- By the 1890s, electric power became practical and more widespread.
- Large cities such as London, New York, and Paris built subway systems.
- When electric propulsion became practical, most street railways were electrified.

These then became known as "streetcars," "trolleys," "trams" and "Strassenbahn."




Training Module on Audit of Railways; Session: 1 9

Slide 12

**History of Rail Transport in India**

- The first train in India became operational in 1851, and was used for the hauling of construction material in Roorkee.
- A year and a half later, on 1853-04-16, the first passenger train service was inaugurated between Bori Bunder, Bombay and Thana. Covering a distance of 34 km (21 miles), it formally heralded the birth of railways in India.




Training Module on Audit of Railways; Session: 1 12



Slide 13

**History of Rail Transport in India**

- In 1907, almost all the rail companies were taken over by the British government.
- The following year, the first electric locomotive appeared.
- Railways were first introduced to India in 1853.
- In 1951 all the rail systems were nationalised as one unit, becoming one of the largest networks in the world.




Training Module on Audit of Railways; Session: 1 13

Slide 16

**Salient Features of Indian Railways**

- Indian Railways have emerged as the sinews of the Indian economy and has reached out to bring together the great Indian family.
- Indian Railways have the distinction of being one of the largest railway systems in the world under a single management.
- The Indian Railway system is managed through zones and operating divisions.




Training Module on Audit of Railways; Session: 1 16

Slide 14

**History of Rail Transport in India**

- Indian Railways has a monopoly on the country's rail transport.
- It is also one of the largest and busiest rail networks in the world, transporting just under five billion passengers and almost 350 million tonnes of freight annually.
- IR is the world's largest commercial or utility employer, with more than 1.6million employees.



Training Module on Audit of Railways; Session: 1 14

Slide 17

**Salient Features of Indian Railways**

- There are also six production units engaged in manufacturing rolling stock, wheels and axles and other ancillary components.
- Research, Designs and Standards Organisation (RDSO) is the sole research and development wing of Indian Railways;
- RDSO has been reorganized as 'Zonal Railway' with effect from 1.1.2003.




Training Module on Audit of Railways; Session: 1 17

Slide 15

**History of Rail Transport in India**

- As of 2005
  - IR owns a total of 216,717 wagons,
  - 39,936 coaches,
  - 7,339 locomotives
  - run a total of 14,244 trains daily, including about 8,702 passenger trains,
  - carry a million tonne of freight traffic and
  - about 14 million passengers covering 6,856 numbers of stations daily.



Training Module on Audit of Railways; Session: 1 15

Slide 18

**Salient Features of Indian Railways**

- The formation of policy and overall control of the Railways is vested in  
**Railway Board comprising:-**
  - Chairman, Railway Board
  - Financial Commissioner and
  - other functional Members for Traffic, Engineering, Mechanical, Electrical and Staff matters.




Training Module on Audit of Railways; Session: 1 18

Slide 19

### Organisational Structure


- The Headquarters of the Indian Railways are located in New Delhi.
- Indian Railways is a publicly-owned company controlled by the Government of India, via the Ministry of Railways.
- The Railway Board, which has six members and a Chairman, reporting to the Ministry for functioning of the Railways.



Training Module on Audit of Railways; Session: 1 19

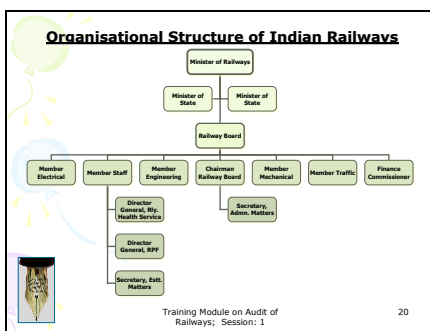
Slide 22

No	Name	Abbr.	Headquarters	Date established
1.	Northern Railway	NR	Delhi	April 14, 1952
2.	North Eastern Railway	NER	Gorakhpur	1952
3.	Northeast Frontier Railway	NFR	Maligaon (Guwahati)	1958
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15.	East Coast Railway	ECoR	Bhubaneswar	
16.	East Central Railway	ECR	Hajipur	



Training Module on Audit of Railways; Session: 1 22


Slide 20



Slide 23

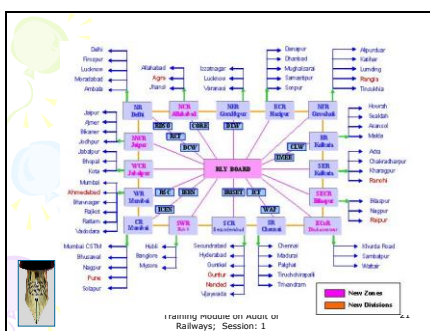
### Organisational Structure

- The Kolkata Metro is owned and operated by Indian Railways, but is not a part of any of the zones.
- Administratively considered to have the status of a zonal railway.



Training Module on Audit of Railways; Session: 1 23

Slide 21



Slide 24

### Organisational Structure

- Central Organisation for Railway Electrification (CORE) is also headed by a GM. This is located at Allahabad.
- This organisation undertakes electrification projects of Indian Railways and monitors the progress of various electrification projects all over the country.



Training Module on Audit of Railways; Session: 1 24

Slide 25

**Organisational Structure**

- Public Sector Undertakings (PSU) under the administrative control of the ministry of railways :-
  - Indian Railways Catering and Tourism Corporation
  - Konkan Railway Corporation
  - Indian Railway Finance Corporation
  - Mumbai Rail Vikas Corporation
  - Railtel Corporation of India – Telecommunication Networks
  - RTES Ltd. – Consulting Division of Indian Railways
  - IRCON International Ltd. – Construction Division
  - Rail Vikas Nigam Limited




Training Module on Audit of Railways; Session: 1 25

Slide 27

**Rail Budget and Finances**

- Figures relating to the receipt and expenditure of the Railway budget are also shown in the General Budget,
  - since they are a part and parcel of the total receipts and expenditure of the Government of India.
- Formation of policy and overall control of the railways is vested in Railway Board.
- As per the 2006 budget, Indian Railways earned Rs. 54,600 crores.



Training Module on Audit of Railways; Session: 1 27

Slide 26

**Rail Budget and Finances**

- Parliament discusses the policies and allocations proposed in the budget.
- The budget needs to be passed by a simple majority in the Lok Sabha.
- Budget is presented to the Parliament by the Union Railway Minister, two days prior to the General Budget, usually around 26 February.




Training Module on Audit of Railways; Session: 1 26

Slide 28

**Rail Budget and Finances**

- Freight earnings
  - increased by 10%
- Passenger earnings, other coaching earnings and sundry other earnings
  - increased by 7%, 19% and 56% respectively over previous year.



Training Module on Audit of Railways; Session: 1 28

Slide 29

**Rail Budget and Finances**

- A new concern faced by the Indian Railways is competition from low cost airlines that has recently made its debut in India.
- In a cost cutting move, the Railways plans to minimise unwanted cessations, and scrap unpopular routes.



Training Module on Audit of Railways; Session: 1 29

# **Session: 2**

## **Audit of Railway Budget**

<b>Session Title: Audit of Railway Budget</b>		<b>Session Guide</b>
<b>Instructor's Guide</b>	<b>Reference</b>	<b>Participants' Response</b>
<b>Session Overview</b>		
<b>Welcome</b> participants to the session and remind them that their active participation is critical for the success of each session.	Lecture	
<b>Learning Objective</b>		
<b>Inform:</b> Given the inputs of Budgetary System of Indian Railways through group discussion, lecture and PowerPoint slide show, the participants will, at the end of the session, acquire an understanding of the basic concepts of the Indian Railway Budget which will help them to focus on audit issues in the practical job scenario.	Lecture	
<b>Basic Concepts</b>		
<b>Discuss:</b> <ul style="list-style-type: none"> <li>● Introduction to the Railway Budget- Its Preparation, Compilation, Scrutiny and Allotment.</li> <li>● Distribution of Funds.</li> <li>● Powers of the Railway Board and the Railway Administration in respect of Budget Allotments.</li> <li>● Parliamentary Financial Control on Appropriation Accounts.</li> <li>● Block Account and other accounts and subsidiary</li> </ul>	Lecture with Power Point Slide Show <b>Session 2 AUDIT OF RAILWAY BUDGET</b>	
<b>Summarise:</b>		
<b>Distribute</b> Participants Note <b>Tell</b> the participants that during the session, we discussed introduction of the Railway Budget-its preparation, compilation etc., Distribution of funds, and Parliamentary financial control on Appropriation Accounts. <b>Invite</b> questions on themes discussed. If participants have any doubts/clarifications about themes, clarify the same. Answer participants queries. <b>Thank</b> the participants and bring the session to a close.	Session 2 Participants' Note	

**Training Method:** Interactive Lecture and Power Point Slide Show.

**Materials Required:** Power Point Slides, Projector, White Board, Marker Pen and Participants' Note.

## Session Title: Audit of Railway Budget

### Session Overview:

Budget is a Constitutional and Management document. Article 112(1) of the Constitution of India prescribes that 'The President shall in respect of every financial year cause to be laid before both the Houses of Parliament a statement of the estimated receipts and expenditure of the Government of India for the year' referred to as 'Annual Financial Statement' and popularly called as the 'Annual Budget'.

- Every budget contains three elements:
  - A review of the preceding year, including the actual receipts and expenditure in that year;
  - An estimate of the receipts and expenditure of the coming year; and
  - Proposals, if any, for meeting the requirements of the coming year.
- The Railway Budget is presented to both Houses of Parliament separately from and ahead of the General Budget.
- Though the Railway Budget is separately presented to Parliament, the figures relating to the receipts and expenditure of the Railways are also shown in the General Budget, since the receipts and expenditure of the Railways are part of the total receipts and expenditure of the Government of India.
- The estimates of expenditure embodied in the Annual Budget separately shows:
  - The sums required to meet expenditure charged upon the Consolidated Fund of India; and
  - The sums required to meet other expenditure proposed to be made from the Consolidated Fund of India
 —thus the expenditure proposed in the Budget is either (i) voted or (ii) charged.
- Article 113(2) of the Constitution of India requires that estimates of voted expenditure shall be submitted in the form of demands for grants. The article also enjoins that no demand for a grant shall be made except on the recommendation of the President.

- In respect of Railways the following expenditure is 'Charged' on the Consolidated Fund of India:

- The salary, allowances and the pensions payable to or in respect of C&AG of India;
- Any sums required to satisfy any judgement, decree or award of any Court or awards by Arbitrators where made into rule of court; and
- Any other expenditure declared by the Constitution or by Parliament by law to be so charged.

- The financial forecast in the Railway Budget is related to the performance targets set for Railway Administration and it is a responsibility of the Railway Managements to ensure the achievement of these associated targets.

### Preparation of Budget by Railway Administration (Fin-309)

- Preparation of the revised and budget estimates should commence at the 'grass root level' i.e. Division, Workshop, Stores Depot etc.;
- The entire responsibility for framing the estimates devolves upon the spending/earning authorities concerned though the actual work of compilation and scrutiny would rest with the FA&CAO who would also draw the attention of the GM to matters of purely financial import;
- The estimates should be as accurate as possible;
- Care should be taken to see that the data on which the forecast is based is adequate and reliable;
- The revised and budget estimate should be framed by various concerned authorities for the following categories:
  - **Gross Receipts** i.e. Coaching Earnings, Goods Earnings, Sundry Other Earnings, Receipts of Worked Lines, Refunds of Revenue etc.;
  - **Ordinary Working Expenses** i.e. Demand 3 to Demand 14, Estimate of Cost of Establishments, Suspense heads, Repairs & Maintenance Expenditure of Rolling Stock, Cost of Fuel, etc.;
  - **Payments to Worked Lines;**
  - **Appropriation to and Expenditure to be met out of Railway Funds;**
  - **Payment to General Revenues** i.e. Dividend on Capital-at-Charge, Contribution for grants to States in lieu of passenger fare

tax, Contribution for assisting the States for financing Safety Works, Repayment of loans and interest thereon, borrowed on a temporary basis from General Revenues to finance Development Fund and Repayment of loans and interest thereon borrowed on a temporary basis from General Revenues to finance the Revenue Reserve Fund; and payment towards amortisation of over capitalisation;

- **Works Expenditure;** and
- **Civil Estimates**
- The requirements of funds under the several sub-heads of demands for grants in respect of the various departments will be advised by the Budget Officer of the Division and by the Departmental Officers. In the case of other Branch Offices, the advise will be sent to the respective Heads of the Departments and the Local Accounts Officer.
- The Accounts Officer will vet these estimates and forward his remarks, if any, to the Heads of the Departments concerned and endorse a copy to the Financial Adviser and Chief Accounts Officer (Budget) along with a copy of the estimates vetted by him.
- The Heads of the Departments will consolidate the requirements of their departments under each of the sub heads of demands, etc. for the Railway as a whole and forward to the Budget section of the FA & CAO's Office.
- These will be scrutinised by the FA & CAO and necessary modification will be discussed with the Heads of the Departments and the final requirements advised to the Railway Board in the prescribed form.
- For this purpose the various sub-detailed heads of account which fall under the several sub-heads of the demands for grants are available in the prescribed proforma, in which the Revised Estimates for the current year and the Budget Estimates for the ensuing year have to be furnished.

### **Compilation and Scrutiny of Budget in the Railway Board (IRFC 354)**

- The estimates of working expenses submitted by the individual railways are subjected to a critical examination by the Railway Board and, after taking all the relevant

factors into consideration, the Railway Board frames its own estimate to the expenditure likely to be incurred during the year.

- The procedure adopted by the Railway Board in fixing the allotment for each railway is-
  - The revised estimate for the current year is first fixed under each demand for each railway, after taking into account the expenditure for the preceding year and comparing the expenditure during the first seven months of the current year with the corresponding period of the previous year, full consideration being paid to the special features of both years;
  - Having thus fixed the revised estimate for the current year, the budget estimate for the next year is prepared on a consideration of the special circumstances so far as known of both years;
  - The amounts provided for the individual railway administration are restricted as nearly as the Railway Board can assess to their actual needs, consistent with the exercise of the most rigid economy.
- The estimates of expenditure on rolling stock, plant & machinery, structural and other engineering works submitted by the railways after having been carefully examined as to the necessity and justification, are discussed with the railway administrations and the works to be undertaken during the budget year decided upon.
- The programmes as finally settled after discussion form the budget estimates of the railways for expenditure to be incurred during the following year on new constructions and open line works chargeable to Capital, Depreciation Reserve Fund, Development Fund, Open-line Works(Revenue) and Accident Compensation, Safety & Passenger Amenities Fund.

### **Budget Allotment**

- The Budget Allotments for the Railway under the various sub-heads of the several grants, as approved by the Parliament are found in the Book of Demands for grants in the case of Railway Grants and in the Budget Orders in case of civil grants.

## Distribution of Funds by the Railway Board

- The grants as voted by the Parliament and the appropriation for the charged expenditure as sanctioned by the President, are distributed by the Railway Board among the railway administrations and other authorities subordinate to them, as soon as possible after the Budget is sanctioned.
- The sums so distributed are called 'Allotments'. The allotments made out of funds voted by the Parliament are shown as 'Voted' and those fixed by the President are shown as 'Charged'.
- The budget orders are accompanied by the final issues of 'Demands for grants' and 'Works, Machinery and Rolling Stock Programmes' containing the detailed distribution of the Budget Allotment made to the railway administrations for working expenses and Capital, DRF, DF and OLWR expenditure.
- The budget allotment made to a railway administration is intended to cover all charges, including the liabilities for past years, to be paid during the year or to be adjusted in the accounts for it.
- It shall be operative until the close of the financial year. Under the 'doctrine of lapse', any unspent balance shall lapse and shall not be available for utilisation in the following year.
- When the Budget Orders issued by the Railway Board show any reduction in the estimates originally submitted to them prompt measures should be taken by the railway administrations to limit the expenditure to the amounts allotted and distributed by the Railway Board.

## Distribution of Funds by a General Manager to the Subordinate Authorities

- GM of individual Railways should take steps immediately to distribute the funds, placed at his disposal to authorities subordinate to him in such manner as he may consider most suitable provided that the total of the sums so allocated does not exceed the total of the grant placed at his disposal.
- In making this initial distribution, he may, at his discretion keep a sum un-allotted as a reserve for emergencies that may arise in future.

- With respect to expenditure on works, the allotment made by the GM to lower authorities shall follow the basic guidelines:
    - A specific sum shall be allotted for each of rolling stock and for each individual work estimated to cost over Rupees one lakh.
    - A lump sum shall be allotted for all works which are individual estimated to cost less than the minimum limit prescribed by him.
    - The condition under which and the extent upto which the authorities may sanction re-appropriations between the sums allotted for individual works shall be specified by GM in making the allotment.
    - Any re-appropriation in excess of that admissible from the sum allotted for an individual work or re-appropriation from and to the lump sum allotted shall require the prior sanction of the GM.
    - No expenditure shall be incurred by an authority without the allotment of necessary funds.
    - The authorities, to whom the funds are allotted, shall be responsible to report at once to the next higher authority. In exceptional cases, where expenditure is authorised in anticipation of the allotment of funds, or in excess of the existing provision the authorisation should be followed by a formal allotment of funds to the extent required.
    - The expenditure on each work shall be limited to the sum allotted for it. If for exceptional reasons, expenditure in excess of budget allotment has to be incurred and if the authority incurring the expenditure is either not in a position to find funds by re-appropriation or is not empowered to sanction a re-appropriation thereof, application for additional funds shall be made to the next higher authority stating how the expenditure is proposed to be made.
- ### Powers of Railway Board in respect of Budget Allotment
- Within the amount of a grant as voted by the Parliament, the Railway Board has full powers, of transferring the provision from one subhead to another by a formal order of re-appropriation, but re-appropriations from one grant to another are not permissible.
  - Under Grant No.-16 no re-appropriation of fund is permissible between Capital, Railway Funds and Revenue even though re-



appropriation is permissible between the various sub-heads of grants viz. the various plan heads.

- As regards 'Charged' expenditure, there are no restrictions on the powers of the Railway Board to transfer provision from one sub-head to another by a formal order of re-appropriation, but no re-appropriation is permissible from one grant to another or from 'Charged' heads to 'Voted' heads or vice versa.

### **Powers of Railway Administration in respect of Budget Allotment**

- No re-appropriation is permissible between 'Voted' and 'Charged' allotments or between allotments made under one grant and another.
- In the case of Grant No. 16 no re-appropriation is permissible between the Capital, Railway Funds and Revenue.

### **Final Modification of Budget**

- The Railway Board should be furnished, for each grant separately, so as to reach them not later than the 21st February each year, with statements showing the additional allotments required (both voted and charged) or surrenders to be made, during the current financial year under each head of appropriation, as prescribed in the budget orders, and requiring the sanction of the President.
- The variations between the final modified allotments required and the revised estimates as fixed by the Board should in all cases be supported by adequate explanations of the reasons for the demand or surrender.
- Any important changes subsequently found necessary should be intimated before 20th March of the year, to enable the President to accord sanction to them where possible, so that the Railway Administration may sanction in time, before the 31st March of the year, any re-appropriation to cover the anticipated excess over allotments.

### **Parliamentary Financial Control on Appropriation Accounts**

- Parliamentary Financial Control is secured by the fact that all 'Voted' expenditure must receive Parliament's prior approval and by the system of reporting back to it, through the Public Accounts Committee, the actual expenditure incurred against the Grant voted by Parliament and appropriations sanctioned by the President.

- The statements which are prepared for presentation to the Public Accounts Committee, comparing the amount of actual expenditure with the amount of grant voted by Parliament and Appropriation sanctioned by the President, are called the 'Appropriation Accounts'.

- The Appropriation accounts should be supported by a Block Account, Capital Statement, a Balance Sheet and a Profit and Loss Account of the railway. These statements should be prepared separately for Commercial and Strategic lines.

### **Block Account**

- Two separate accounts are maintained to represent the value of all the physical assets of the railway undertaking a Loan Account and a Block Account.
- The Loan Account represents the loan (share) capital and the physical assets created there from.
- The Block Account represents all the physical assets of the undertaking whether financed from the loan capital or the Railways' own funds.
- The Block Account is maintained in form no. F-429 separately for commercial and strategic lines and includes
  - Expenditure on Capital Account;
  - Expenditure from the Development Fund;
  - Expenditure from the Depreciation Reserve Fund, the Development Fund and Open line Works-Revenue including 'new minor works' relating only to creation of new assets or improvement in the assets replaced;
  - Expenditure on any assets which have come to railways without financial adjustment.

### **Other Accounts and Subsidiary Statements**

- Other accounts and subsidiary statements, which should accompany the Appropriation Accounts of individual Railways and Production Units are:
  - DRF Account,
  - DF Account,
  - Pension Fund Account,
  - Stores Account, Stock Adjustment Account,

- Statement of expenditure held under objection and not regularised by competent authority,
- Statement of Undercharges detected by Accounts and Audit etc.

### **Percentage of Working Expenses to Earnings**


- A statement showing percentage of working expenses to earnings in respect of the entire system is also submitted with the Appropriation Accounts.
- This statement contains a brief note explaining the variation in the percentage for the year as compared with that for the previous year.
- The percentage is worked out on the following basis:

Total Gross Earnings- ----- (1)

Total Gross Working Expenses- ----- (2)

$$\text{Percentage} = \frac{(2) \times 100}{(1)}$$


Slide 1



# Session 2

## Audit of Railway Budget

Slide 4




### Basic Concepts

- Railway Budget is presented to both Houses of Parliament separately
  - figures relating to the receipts and expenditures of the Railways are also shown in the General Budget as they are the part of the total receipts and expenditure of the Government of India.
- The estimates of expenditure embodied in the Annual Budget separately shows:
  - The sums required to meet expenditure charged upon the Consolidated Fund of India; and
  - The sums required to meet other expenditure proposed to be made from the Consolidated Fund of India

Training Module on Audit of Railways, Session: 2 4

Slide 2




### Learning Objective

- In this session, the participants will be able to understand the basic concepts of the Budgetary System of the Indian Railway which will help them to focus on audit issues in the practical job scenario.

Training Module on Audit of Railways, Session: 2 2

Slide 5




### Basic Concepts

- Following expenditure is 'Charged' on the Consolidated Fund of India:
  - Salary, allowances and the pensions payable to or in respect of C&AG of India;
  - Any sums required to satisfy any judgement, decree or award of any Court or awards by Arbitrators where made into rule of court; and
  - Any other expenditure declared by the Constitution or by Parliament by law to be so charged.

Training Module on Audit of Railways, Session: 2 5

Slide 3




### Basic Concepts

- An estimated receipts and expenditure of the Government of India for every year, popularly called as the 'Annual Budget', is placed before Parliament;
- Every budget contains three elements:
  - A review of the preceding year, including the actual receipts and expenditure in that year;
  - An estimate of the receipts and expenditure of the coming year; and
  - Proposals, if any, for meeting the requirements of the coming year.

Training Module on Audit of Railways, Session: 2 3

Slide 6



### Preparation of Budget


- Preparation of the Revised and Budget estimates should commence
  - at the 'grassroots level' i.e. Division, Workshop, Stores Depot etc.;
- Estimates should be as accurate as possible;
- Care should be taken to see that the data on which the forecast is based is adequate and reliable;

Training Module on Audit of Railways, Session: 2 6

Slide 7

**Preparation of Budget contd.**

- The Revised and Budget estimates should be framed by various concerned authorities for the following categories:
  - Gross Receipts i.e.
    - Coaching Earnings, Goods Earnings, Sundry Other Earnings, Receipts of Worked Lines, Refunds of Revenue etc.;
  - Ordinary Working Expenses i.e.
    - Demand 3 to Demand 14, Estimate of Cost of Establishments, Suspense Heads, Repairs & Maintenance Expenditure of Rolling Stock, Cost of Fuel, etc.;




Training Module on Audit of Railways, Session: 2 7

Slide 10

**Preparation of Budget contd.**

- After consolidation of the requirements of their departments the Heads of the Departments forward these estimates to the FA & CAO / Budget.
- After scrutiny, FA & CAO advises the final requirements to the Railway Board in the prescribed form after necessary modification in the estimates.




Training Module on Audit of Railways, Session: 2 10

Slide 8

**Preparation of Budget contd.**

- Payments to Worked Lines;
- Appropriation to and Expenditure to be met out of Railway Funds;
- Payment to General Revenues i.e. Dividend on Capital-at-Charge, Contribution for Grants to States in lieu of Passenger Fare Tax, Contribution for Assisting the States for financing Safety Works etc.
- Works Expenditure; and
- Civil Estimates




Training Module on Audit of Railways, Session: 2 8

Slide 11

**Compilation and Scrutiny of Budget in the Railway Board**

- Railway Board frames their own estimates to the expenditure likely to be incurred during the year for all the Railways.
- In fixing the allotment the procedure adopted by the Railway Board is-
  - Having fixed the Revised Estimate for the current year, the Budget Estimate for the next year is prepared on a consideration of the special circumstances so far as known of both years;
  - The amounts provided for the individual Railway Administrations are restricted as nearly as the Railway Board can assess as to their actual needs.




Training Module on Audit of Railways, Session: 2 11

Slide 9

**Preparation of Budget contd.**

- Budget Officer / Division and the Departmental Officers send the requirements of funds in respect of the various departments to the respective Heads of the Departments and the Local Accounts Officer .
- Accounts Officer vets these estimates and forwards his remarks to the Heads of the Departments concerned and endorses a copy to the FA&CAO (Budget) along with a copy of the estimates vetted by him.




Training Module on Audit of Railways, Session: 2 9

Slide 12

**Budget Allotment**

- The Budget Allotments for the Railway as approved by the Parliament are found in the Book of Demands for grants in the case of Railway Grants and in the Budget Orders in case of civil grants.




Training Module on Audit of Railways, Session: 2 12

Slide 13

### Distribution of Funds

- Grants as Voted by the Parliament and the appropriation for the Charged expenditure as sanctioned by the President, are distributed by the Railway Board among the Railway Administrations after the Budget is sanctioned.
- The Budget Orders are accompanied by the final issues of 'Demands for Grants' and 'Works, Machinery and Rolling Stock Programmes' containing the detailed distribution of the Budget Allotment made to the Railway administrations.




Training Module on Audit of Railways, Session: 2 13

Slide 16

### Powers of Railway Board and Railway Administration

- In respect of Budget Allotment
  - Within the amount of a Voted grant the Railway Board has full powers of transferring the provision from one subhead to another by a formal order of re-appropriation; and
  - As regards 'Charged' expenditure, Railway Board has full power to transfer provision from one sub-head to another by a formal order of re-appropriation, but
    - no re-appropriation is permissible from one grant to another or from 'Charged' heads to 'Voted' heads or vice versa.

Under Grant No.-16 no re-appropriation of fund is permissible between Capital, Railway Funds and Revenue.




Training Module on Audit of Railways, Session: 2 16

Slide 14

### Distribution of Funds

- Budget allotment is intended to cover all charges, liabilities for past years, to be paid during the year.
- Any unspent balance shall lapse and shall not be available for utilisation in the following year under the 'doctrine of lapse'.




Training Module on Audit of Railways, Session: 2 14

Slide 17

### Final Modification of Budget

- Railway Board should be furnished, for each grant separately, so as to reach them not later than the 21st February each year, with statements showing the additional allotments required or surrenders to be made.
- The variations between the final modified allotments required and the revised estimates as fixed by the Board should in all cases be supported by adequate explanations of the reasons for the demand or surrender.

Any important changes subsequently found necessary should be intimated before 20th March of the year, to enable the President to accord sanction to them.




Training Module on Audit of Railways, Session: 2 17

Slide 15

### Distribution of Funds by GM to the Subordinate Authorities

- GM of individual Railways takes steps to
  - distribute the funds placed at his disposal to authorities subordinate to him.
- In making this initial distribution, he may, at his discretion
  - keep a sum un-allotted as a reserve for emergencies
- GM follows the basic guidelines while distributing funds to lower authorities:
  - A specific sum shall be allotted for each of rolling stock and for each individual work estimated to cost over Rupees One Lakh.
  - A lump sum shall be allotted for all works which are estimated to cost less than the minimum limit prescribed by him.




Training Module on Audit of Railways, Session: 2 15

Slide 18

### Block Account

- The Block Account represents all the physical assets of the undertaking whether financed from the loan capital or the Railways' own funds.
- The Block Account is maintained separately for commercial and strategic lines and includes expenditure-
  - on Capital Account;
  - from the Development Fund;
  - from the Depreciation Reserve Fund, the Development Fund and Open line Works-Revenue;
  - from ACSPAF on passenger amenities and safety works;




Training Module on Audit of Railways, Session: 2 18

Slide 19

**Other accounts and subsidiary statements**

- Other accounts and subsidiary statements, which should accompany the Appropriation Accounts are:
  - DRF Account,
  - DF Account,
  - Pension Fund Account,
  - ACSPAF Account,
  - Stores Account, Stock Adjustment Account,




Training Module on Audit of Railways, Session: 19

Slide 20

**Percentage of Working Expenses to Earnings**

- A statement showing percentage of working expenses to earnings in respect of entire system is also submitted with the Appropriation Accounts.
- This statement contains brief note explaining the variation in the percentage for the year.
- The percentage is worked out on the following basis: .
  - Total Gross Earnings - - - - - (1)
  - Total Gross Working Expenses- - - - (2)

$$\text{Percentage} = \frac{(2) \times 100}{(1)}$$


Training Module on Audit of Railways, Session: 20











# Session: 3



## Audit of Railway Establishments

<b>Session Title: Audit of Railway Establishments.</b>		Session Guide
<b>Instructor's Guide</b>	Reference	Participants' Response
<b>Session Overview</b>		
<b>Welcome</b> participants to the session and remind them that their active participation is critical for the success of each session.	Lecture	
<b>Learning Objective</b>		
<b>Inform:</b> Given the inputs of fundamental rules on Establishment, traveling allowance, leave rules, Provident Fund & Pension Rules of Indian Railways through group discussion, lecture and PowerPoint slide show, the participants will, at the end of the session, acquire an understanding of the basic concepts of the Establishment, leave rules, Provident Fund & Pension Rules which will help them to focus on audit issues in the work context.	Lecture	
<b>Basic Concepts</b>		
<b>Discuss:</b> <ul style="list-style-type: none"> <li>● Fundamental Rules on Establishment and Provident Fund.</li> <li>● Travelling Allowance (TA) Rules.</li> <li>● Foreign Service and Deputation.</li> <li>● Leave Rules – nature of Leave admissible to a Railway employee - Leave Average Pay, Half Pay Leave, Leave Not Due, Child Care Leave, Paternity Leave, Leave Without Pay, Leave Encashment during Service and at the time of Retirement.</li> <li>● State Railway Provident Fund (SRPF) - advance and withdrawals from the fund.</li> <li>● Pension – Superannuation Pension &amp; other Pensions.</li> <li>● Joining Time Rules.</li> <li>● Computerised Pay Roll System.</li> <li>● Audit Check of Pay Bills, TA Bills and PF &amp; Pension cases</li> </ul>	Lecture with Power Point Slide Show <b>Session 3 AUDIT OF RAILWAY ESTABLISH- MENT</b>	
<b>Application:</b>		
<ul style="list-style-type: none"> <li>● Distribute Illustration I with questionnaire</li> <li>● Request the participants to answer the questionnaire.</li> <li>● Distribute the solutions to Illustration-I</li> <li>● Discuss the solutions and elicit the views of participants.</li> <li>● Distribute Illustration II with questionnaire</li> <li>● Request the participants to answer the questionnaire.</li> <li>● Distribute the solutions to Illustration-II</li> <li>● Discuss the solutions and elicit the views of participants.</li> </ul>	Session 3 Illustration I and solutions  Illustration II and solutions	
<b>Summarise:</b>		
<b>Distribute</b> Participants' Note. <b>Tell</b> the participants that during the session, we discussed fundamental rules on Establishment and Provident Fund, TA, Foreign Service and Deputation, Joining Time Rules and Computerised Pay Roll System etc. <b>Invite</b> questions on themes discussed. If participants have any doubts/clarifications about themes, clarify the same. Answer participants queries. <b>Thank</b> the participants and bring the session to a close.	Session 3 Participants' Note	

**Training Method:** Interactive Lecture and Power Point Slide Show.

**Materials Required:** Power Point Slides, Projector, White Board, Marker Pen and Participants' Note.

## **Session Title:** Audit of Railway Establishments: Fundamental Rules on Establishment and Provident Fund

### **Pay and Allowances**

- A railway servant shall begin to draw the pay and allowance attached to the post with effect from the date he assumed the duties of the post, and shall cease to draw them as soon as he ceases to discharge those duties. However, an officer who is absent from duty without any authority shall not be entitled to any pay and allowances during the period of such absence.
- **Pay-** means the amount drawn monthly by a government servant as
  - the pay other than special or pay granted in view of his personal qualification, which has been sanctioned for a post held by him substantively or in an officiating capacity or to which he is entitled by reason of his position in a cadre; and
  - overseas pay, special pay and personal pay and
  - any other emoluments which may be specially classified as pay by the President.
- **Overseas Pay-** means pay granted to a railway servant in consideration of the fact that he is serving in a country other than the country of his domicile.
- **Personal Pay-** means additional pay granted to a railway servant-
  - to save him from a loss of substantive pay in respect of a permanent post other than a tenure post due to a revision of pay or to any reduction of such substantive pay otherwise than as a disciplinary measure; or
  - in exceptional circumstances, on other personal considerations.
- **Time-scale Pay-** means pay which rises by periodical increments from a minimum to a maximum.
- Time-scales are said to be identical if the minimum, the maximum, the period of increments and the rate of increment of the time-scales are identical.
- A post is said to be on the same time-scale as another post on a time-scale, if the two time-scales are identical and the posts fall within a cadre or a class in a cadre, such cadre or class

having been created in order to fill all posts involving duties of approximately the same character or degree of responsibility, in a service or establishment or group of establishments; so that the pay of the holder of any particular post is determined by his position in the cadre or class and not by the fact that he holds that post.

### **Additions to Pay**

- **Fees and Honoraria-** A competent authority may permit a railway servant, if it be satisfied that this can be done without detriment to his official duties or responsibilities, to perform a specified service or series of services for a private person or body or for a public body including a body administering a local fund and to receive as remuneration therefore, if the service be material, a non-recurring or recurring fee, and
- A competent authority may grant or permit a railway servant to receive an honorarium as remuneration for work performed which is occasional or intermittent in character and either so laborious or of such special merit as to justify a special reward. Except when special reasons, which should be recorded in writing, exist for a departure from this provision, sanction to the grant or acceptance of an honorarium should not be given unless the work has been undertaken with the prior consent of the competent authority and its amount has been settled in advance.

### **Dismissal and Removal and Suspension**

- **Date from which affected-** the pay and allowances of a railway employee who is removed or dismissed from service cease from the date of the order of removal or dismissal.
- **Pay during suspension-** a railway servant under suspension shall be entitled to the following payments-
  - a subsistence allowance at an amount equal to the leave salary which the railway servant would have drawn if he had been on leave on half average pay or on half pay and in addition DA, if admissible, on the basis of such leave salary.
 Provided that where the period of suspension exceeds three months, the authority which made or is deemed to have made the order of suspension shall be

competent to vary the amount of subsistence allowance for any period subsequent to the period of the first three months as follows:

- the amount of subsistence allowance may be increased by a suitable amount, not exceeding 50% of the subsistence allowance admissible during the period of the first three months, if, in the opinion of the said authority, the period of suspension has been prolonged for reasons, to be recorded in writing, not directly attributable to the railway servant.
- the amount of subsistence allowance may be reduced by a suitable amount, not exceeding 50% of the subsistence allowance admissible during the period of the first three months, if, in the opinion of the said authority, the period of suspension has been prolonged for reasons, to be recorded in writing, not directly attributable to the railway servant.
- the rate of DA will be based on the increased or decreased amount of subsistence allowance admissible.
- No payment shall be made unless the railway servant furnishes a certificate that he is not engaged in any other employment business, profession or vocation.

### **Travelling Allowance (TA) Grades for travelling allowance**

- For TA Railway servants are divided as follows:—
  - Rs.16,400/- and above
  - Rs. 8,000/- to Rs. 16,399/-
  - Rs. 6,500/- to Rs. 7,999/-
  - Rs. 4,100/- to Rs. 6,499/-
  - Below Rs. 4,100/-
- Where a railway servant is promoted or reverted or is granted an increased rate of pay with retrospective effect, no revision of claims for travelling allowance is permissible, in respect of the period intervening between the date of promotion or reversion or grant of increased rate of pay, and that on; which it is notified, unless it is clear that there has been an actual change of duties.

- 'Pay' for the purpose of determining the entitlement of travelling allowance, means-
  - the 'pay' other than special pay or pay granted in view of his personal qualifications, overseas pay, special pay and personal pay.

### **Different kinds of travelling allowance**

- TA is classified as under:-
  - Permanent or consolidated travelling allowance,
  - Conveyance allowance,
  - Mileage allowance,
  - Daily allowance,
  - Actual cost of travelling.

### **Permanent or Consolidated Travelling Allowance**

- This allowance may be granted to any railway servant whose duties require him to travel extensively.
- Such an allowance shall be in lieu of all other forms of travelling allowance for journeys within the railway servant's sphere of duty and may be drawn all the year round whether the railway servant is absent from his Headquarters or not.
- A permanent travelling allowance to a railway servant, subject to:-
  - No such allowance shall be granted unless the railway servant has to be absent from his Headquarters on duty for more than 20 days in a month on the average,
  - the allowance must be so fixed as not to be a source of profit and shall be so calculated as to be equivalent ultimately to the travelling allowance admissible under the rules if no permanent travelling allowance were granted,
  - adequate arrangements shall be made by the Head of the Department or the immediate superior of the person drawing the allowance to see that the necessary amount of touring is performed.
- A permanent travelling allowance shall not be drawn during leave, temporary transfer, or joining time or, unless otherwise expressly provided in the TA rules, during any period for which travelling allowance of any other kind is drawn.
- When a railway servant holds either substantively or in an officiating capacity, two or more posts to each of which such permanent

travelling allowance is attached, he may be granted such permanent travelling allowance, not exceeding the total of all the allowances, as the competent authority may consider to be necessary in order to cover the travelling expenses which he has to incur.

- When a railway servant in receipt of permanent travelling allowance travels on duty by road, steamer or air with proper sanction beyond his sphere of duty, he may draw appropriate travelling allowance for the entire journey, including such part of it as is within his sphere of duty

### **Conveyance Allowance**

- A monthly conveyance allowance to any railway servant who is required to travel extensively at or within a short distance from his Headquarters under conditions which do not render him eligible for daily allowance.

- A conveyance allowance may be drawn all the year round on the permission of the sanctioning authority.

- Conveyance allowance shall not be forfeited during absence from Headquarters, and may be drawn in addition to any other travelling allowance admissible, provided that a railway servant, who is in receipt of a conveyance allowance specifically granted for the upkeep of a motor car or motor cycle, shall not draw mileage or daily allowance for journey by a motor car or motor cycle except on such conditions as the sanctioning authority may prescribe.

- A conveyance allowance may be drawn during leave or temporary transfer, or holidays prefixed or suffixed to leave or joining time.

### **Daily Allowance (D.A)**

- A daily allowance is a uniform allowance for each day of absence from Headquarters, which is intended to cover ordinary daily charges incurred by the railway servant in consequence of such absence.

- Daily allowance is admissible at the rate as prescribed in railway establishment code (vol.-II) para 161.

- On day(s) when the railway servant on tour is provided with free board and lodging, he will draw 1/4th of D.A for that (those) day(s).

- If he is provided with only free board, he will draw 1/2 of D.A for that (those) day(s).

- If he is provided with only free lodging, he will draw 3/4th of D.A for that (those) day(s).

- Daily allowance may be drawn by a railway servant who is not in receipt of a permanent travelling allowance on any day on which he proceeds on tour beyond a radius of 8 kms. from his Headquarters or returns to his Headquarters from a similar distance.

- Full daily allowance is granted for each completed day of absence from the Headquarters reckoned from mid night to mid night i.e. for each calendar day for the day of departure from his Headquarters or return to his Headquarters.

- When the journey commences and ends on the same calendar day, the railway servant shall be granted D.A proportionately:-

- If absence from Headquarters does not exceeds six consecutive hours . . . 30% of the D.A.

- If absence from Headquarters does not exceed twelve consecutive hours . . . 70% of the D.A.

- If absence from Headquarters exceeds twelve consecutive hours . . . 100% of the D.A.

### **Journeys by sea or river steamers**

- A railway servant, travelling by sea/river steamer while on tour, shall be entitled to draw the actual fare for journey by sea/river steamer (unless free passes are issue) in addition to his daily allowance.

### **Journeys by air**

- A railway servant entitled to travel by air will draw the actual fare for journeys by air and in addition, draw daily allowance for the entire absence from the Headquarters starting with departure from Headquarters and ending with arrival at Headquarters, to cover both on the way expenses as well as expenses for halt at outstation.

- Every journey by air must, before it is undertaken, receive the sanction of the Railway Board or the General Manager of a Railway or the officer exercising the powers of a General Manager, as the case may be.

- Journeys by air should be permitted only in cases of extreme urgency or where saving the public time is essential. Each case of journey proposed to be performed by air, should be considered on its merits before it is sanctioned.



### Travelling Allowance in case of Transfer

- TA shall not be drawn by the railway servant unless he is transferred from one station to another in public interest.
- The railway servant in transit from one lower post to another higher post, would be entitled to class/grade in which his tenure of the lower of the two posts would place him.
- A railway servant shall not be entitled to draw any TA if there is no change of residence due to his transfer.
- Railway servants transferred from one place to another in public interest whose families do not accompany them to the new station during the first journey, may be allowed the option to claim TA for themselves either for the first journey undertaken by them to join the post at the new Headquarters or for the subsequent journey that they undertake alongwith their family members from the old to the new stations.

### Foreign Service and Deputation

- No railway servant may be transferred to foreign service against his will.
- Transfer to foreign service outside India shall not be sanctioned by an authority other than the President.
- If a railway servant is transferred to foreign service while on leave, he ceases, from the date of such transfer, to be on leave and to draw leave salary.
- When the transfer of a railway servant to foreign service is sanctioned, the pay which he shall receive in such service must be precisely specified in the order sanctioning the transfer.
  - If it is intended that he shall receive any remuneration, or enjoy any concession of pecuniary value in addition to his pay proper, the exact nature of such remuneration or concession must be similarly specified.
  - No railway servant will be permitted to receive any remuneration or enjoy any concession which is not so specified; and if the order is silent as to any particular remuneration or concession, it must be assumed that the intention is that it shall not be enjoyed.
- The terms granted to the railway servant must not be such as to impose an unnecessary

heavy burden on a foreign employer which employs him.

- The terms granted must not be so greatly in excess of the remuneration which the railway servant would receive in Government service as to render Foreign Service appreciably more attractive than Government service.
- A railway servant on foreign service in India is himself personally responsible for his observance of the prescribed rule.
- Foreign service contribution towards pension/provident fund/gratuity etc. by recognised unions/federations will not be realised in respect of
  - Two persons in the case of each recognised Federation
  - Two persons in the case of each recognised central Union at the Zonal Level
  - One person in each division of Railway for recognised Union.
- As regards contribution towards leave salary, the Union concerned should bear the liability for the same in respect of individuals concerned for the leave earned during the period of service with the Union and pay him the leave salary whenever the individual takes leave.
- Leave earned during the period of such deputation will lapse on reversion to the parent office.
- The travelling allowance of a railway servant both in respect of the journey on transfer to foreign service and the journey on reversion there-from to railway will be borne by the foreign employer.
- In the case of deputation to purely private Bodies, the concession of Railway Travelling Allowance during joining time (both-ways) will be admissible only if the private Bodies agreed to reimburse the entire cost of travelling under railway rules.

### Leave Rules

**Leave on average pay-** In terms of Para 523 of Railway Establishment Code, Vol. I 1(a)

(i) A railway servant permanent or temporary other than one who is serving in a railway school shall be entitled to 30 days leave on average pay in a calendar year.

(ii) The leave account of every railway servant shall be credited with leave on average pay in advance in two instalments of

15 days each on the first day of January and July every calendar year.

(b) The leave at the credit of a railway servant at the close of the previous half year shall be carried forward to the next half year subject to the leave so carried forward plus the credit for the half year do not exceed the maximum limit of 300 days.

(c) A period spent in foreign service shall count as duty for purpose of this rule, if contribution towards leave salary is paid on account of such period.

(d) The following procedure for crediting LAP on 1st Jan./1st July w.e.f. 01.07.1997 in respect of Railway employees may be adopted:--

(i) In case of Railway employees, having at their credit leave on Average Pay of 285 days or less as on 1st January/1st July of a year, LAP of 15 days or proportionately less in respect or retiring persons of those leaving service during the next half year may continue to be credited to their leave account in advance as at present.

(ii) In cases where the Leave on Average Pay at credit as on 1st January/1st July is 300 days or less but more than 285 days, credit of LAP for 15 days may be kept separately and first adjusted against any LAP that the Railway servant may take during the ensuing half year and the balance, if any, credited to the LAP account at the close of the half year subject to the ceiling of 300 days. If the LAP taken during the half year is more than 15 days the amount in excess of 15 days will, however, have to be debited to the leave account.

(Authority:- Railway Board's letter No. E(P&A)I-2000/CPC/LE-3 dt.1.8-2000).

2. The maximum leave on average pay that may be granted at a time to a railway servant shall be 180 days.

#### **Calculation of leave on average Pay-(1)**

Leave on Average pay shall be credited to the leave account of a railway servant at the rate of 2 ½ days for each completed calendar month of service which he is likely to render in a half year in which he is appointed.

(2) (a) The credit for the half year in which a railway servant is due to retire or resigns from the service shall be afforded only at the rate

of 2½ days per completed calendar month upto the date of retirement or resignation.

(b) When a railway servant is removed or dismissed from service or dies while in service, credit of earned leave shall be allowed at the rate of 2 ½ days per completed calendar month upto the end of the calendar month preceding the calendar month in which he is removed or dismissed from service or dies in service.

(3) If a railway servant has availed of extraordinary leave and/or some period of absence has been treated as dies non during the previous half year, the credit to be afforded to his leave account at the commencement of the next half year shall be reduced by 1/10th of the period of such leave and/or dies non subject to a maximum of 15 days.

(1) While affording credit of Leave on Average Pay fraction of a day shall be rounded off to the nearest day.

(Authority:- Railway Board's letter No. E(P&A)I-2000/CPC/ALE-5 dt.7.2-97) .

#### **Half Average Pay**

##### **As per Rules 526 of Establishment Code Volume I - 1(a)**

A railway servant, permanent or temporary including the one who is serving in a railway school, shall be entitled to Leave on Half Average Pay of 20 days in respect of each completed year of service.

(Authority Board's letter No E(P&A)I-2008/CPC/LE-10 dated 06.03.2009).

(b) The leave due under clause (a) may be granted on medical certificate or on private affairs.

(c) The amount of leave on half average pay that can be availed of in one spell irrespective of its being combined with any other kind of leave or not shall be limited to 24 months.

(2) If a railway servant is on leave on the day on which he completes a year of service, he shall be entitled to half pay leave without having to return to duty.

#### **Calculation of Half Average Pay**

(3) The Leave on Half Average Pay will be credited to the leave account of a Railway

servant on 1<sup>st</sup> January and 1<sup>st</sup> July each as indicated below:-

(1) The account of Leave on Half Average Pay of every railway servant shall be credited with Leave on Half Average Pay in advance, in two instalments of ten days each on the first day of January and July of every calendar year.

(Authority Board's letter No E(P&A)I-2008/CPC/LE-10 dated 06.03.2009).

(2) The leave shall be credited to the leave account at the rate of 1 1/4<sup>th</sup> days for each completed calendar month of service which the railway servant is likely to render in the half-year of the calendar year in which he/she is appointed.

(3) The credit for half-year in which the railway servant is due to retire or resigns from service shall be allowed at the rate of 1 1/4<sup>th</sup> days per completed month upto the date of retirement resignation.

(4) When a railway servant is removed or dismissed or dies while in service, credit of leave on half-average pay shall be allowed at the rate of 1 1/4<sup>th</sup> days per completed calendar month upto the end of calendar month preceding the calendar month in which the railway servant is removed or dismissed from service or dies while in service.

(5) Leave on half-average pay under these rules may be granted on medical certificate or on private affairs provided that in the case of railway servants, not permanently employed, no leave on half-average pay shall be granted unless the authority competent to grant leave has reasons to believe that the railway servant will return on its expiry, except in the case of a railway servant who has been declared completely or permanently incapacitated for further service by a medical authority.

(6) While calculating the completed months of service the month may be rounded off to the next higher if it exceeds more than 15 days (For example if a railway servant has completed a year's service as on 11th May 1986, he may be given the benefit of L.H.A.P. from May since it exceeds 15 days

to December 1985 for 13 days viz. 1 1/4 X 8 = 10).

(7) Where a period or absence for suspension of a Railway servant has been treated as dies-non in a half year, the credit to be afforded to his half-pay leave account at the commencement of next half-year, shall be reduced by one-eighteenth of the period of dies-non, subject to a maximum of ten days.

(Authority Board's letter No. E(P&A)I-2003/CPC/LE4 dated 19-06-2003).

(8) While affording credit of half pay leave, fraction of a day may be rounded off to the nearest day.

### State Railway Provident Fund (SRPF)

- SRPF rules will apply to all railway servants both pensionable and non-pensionable, provided no government contribution and special contribution will be credited to the account of the subscriber who are pensionable.

- This rule shall not apply to

- Non-pensionable employees taken over from the ex-State Railways who opted to be governed by the ex-State Railways scales of pay applicable to them and on promotion also elected to retain ex-State Railways scales of pay, and

- Pensionable railway servants of ex-State Railways with more than 3 years service at the time of taking over.

- **Compulsory subscribers**—all railway servants shall subscribe to the fund, in accordance with prescribed rules either from the 1<sup>st</sup> of the month following that in which they complete one year's continuous service, or from the date of confirmation, whichever is earlier.

- Probationers to railway services, Group-A & Group-B shall subscribe from the date of appointment.

- **Optional Subscriber**—a railway servant who, after having served in technical department as an apprentice on an agreement for fixed period, is confirmed in a permanent post may be permitted to subscribe to the fund with retrospective effect for any complete year or years of his apprenticeship.

- A re-employed person may also be permitted to subscribe to the fund from date of his re-employment.

- **Subscribers' Accounts**-an account shall be opened in the name of each subscriber in which shall be credited-
  - his subscriptions
  - the contribution, if any,
  - the interest on the subscriptions and contributions
  - incentive bonus on the subscriptions (including voluntary subscription)
- Every subscriber shall subscribe monthly to the fund when on duty, foreign service, deputation, temporary transfer from railway service to any other government service or leave other than leave without pay.
- The amount of subscription payable for any month shall be 1/12<sup>th</sup> of the subscriber's emoluments for that month.
- The subscription shall be rounded off to the nearest rupee, 50 paise and above being counted as a next higher rupee and less than 50 paise being dropped.
- A subscriber shall not subscribe to the fund for the month in which he quits service unless, before the commencement of the said month, he communicates to the head of office in writing his opinion to subscribe for the said month.
- Interest to the provident fund shall be paid to the credit of the account of a subscriber at such rate as may be determined for each year according to the method of calculation prescribed from time to time by the President.
- Interest shall be credited with effect from 31<sup>st</sup> March of each year in the following manner:
  - On the amount of the credit of a subscriber on 31<sup>st</sup> March of the preceding year, less any sums withdrawn during the current year-interest for 12 months;
  - On sums withdrawn during the current year interest from the 1<sup>st</sup> April of the current year upto the last day of the month preceding the month of withdrawal;
  - On sums withdrawn during the current year - interest from the 1<sup>st</sup> April of the current year upto the date of tender of payment;
  - On all sums credited to the subscriber's account after the 31<sup>st</sup> March of the preceding year - interest from the date of deposit upto the 31<sup>st</sup> March of the current year.

Provided that when the amount standing at the credit of a subscriber has become payable, interest thereon shall be credited in respect only of the period from the beginning of the current year, or from the date of deposit as the case may be, upto the date of tender of payment, or upto the end of the six month after the month in which the amount became payable, whichever is earlier.

### **Advance and withdrawals from the fund**

- The authority competent to sanction an advance/withdrawals is the controlling officer. This power may be delegated to-
  - Chief Personnel Officer/Additional Chief Personnel Officer (in case of Gr.-A or Gr.-B officer);
  - A Divisional officer including a Gr.-A or Gr.-B officer in independent charge of an office in case of Gr.-C subscriber employed under him;
  - An Assistant Personnel officer or an officer of an equivalent rank in the case of Gr.-D subscriber.
- The advances/withdrawals may be sanctioned in special cases even after the relevant event, provided:
  - The authority satisfied that adequate reasons existed for not applying for the advances/withdrawals before the occurrence of the event and necessity still exist for withdrawing the money from the provident fund such as for liquidating some previous borrowings;
  - Advance/withdrawals have been applied for not more than 3 months after the event.
- **Advances from the fund**—an advance may be granted to a subscriber from the amount standing to his credit in the fund at the discretion of the authority on the following conditions:
  - A subscriber shall satisfy the authority of the necessity for the advance;
  - The authority shall record in writing its reasons for granting the advance.

Provided that if the reasons to be recorded are of a confidential nature, they may be communicated by the sanctioning authority to

the Accounts Officer personally and/or confidentially.

- The advance shall in no case exceed the amount of subscription and interest thereon standing to the credit of the subscriber in the fund at the time when the advance is granted;
- Advances on more than one account are not sanctioned simultaneously;
- A new advance should not be granted until at least 50% of the last advance has been repaid;
- An overall limit is always enforced that the amount of the advance is such that after making all permissible deductions the net amount payable is not less than 50% of the basic pay; and
- The advance is required—
  - to pay for the passage of the subscriber when proceeding on leave out of India on medical certificate or returning after such absence; or
  - to meet the expenses of the subscriber, or of any member of his family, his parents, minor brothers, or widowed sisters, if they are dependent on him, for making a journey in India or outside India under medical advice or to meet expenses incidental to his or to their severe illness;
  - to meet the cost of education or overseas passage for education of the subscriber.
- **Withdrawal from the fund**— withdrawal can be made from fund for the various purposes mentioned below under the sanction of competent authority:-
  - Funeral expenses and immediate requirement of the family of a deceased subscriber;
  - Construction of House Building;
  - Purchase of House site;
  - Marriage Expenses;
  - Educational Expenses; and
  - Medical Expenses.

### Retirement/Pension

In Railway Establishment Code, Volume II and Railway Services (Pension) Rules, 1993 & Fundamental Rules (containing Central Civil

Services (Pension) Rules, 1972) following provisions are laid down regarding Pensions. Provisions laid down in CCS (Pension) Rules applies mutatis mutandis to Railway servants also.

**Superannuation Pensions** (Rule 1801 of Estt. Code, Volume II & Rule 51 of Railway Services (Pension) Rules, 1993):

A superannuation pensions shall be granted to a railway servant who is retired on his attaining the age of compulsory retirement. Every Railway servant shall retire from service on the afternoon of the last day of the month in which he attains the age of sixty years

Provided that a Railway servant whose date of birth is the first of a month shall retire from service on the afternoon of the last day of the preceding month on attaining the age of sixty years.

In the absence of specific orders to the contrary, every Railway servant shall demit service on the due date of superannuation.

In case a Railway servant continues in service, beyond such due date, the period of over-stay shall be treated as irregular and the pay/allowance etc. drawn during the said period shall be recovered.

Railway servants governed by the Pension rules must be retired on the due date of superannuation even if they remain on suspension on that date and the enquiries into the charges are still in progress.

**Retiring Pension**-A retiring pension shall be granted to a railway servant who retires, or has retired before attaining the age of compulsory retirement, in accordance with the provisions of rules 66 (Retirement on completion of 30 years qualifying service) and 67 (Retirement on completion of 20 years qualifying service) of

Railway Services (Pension) Rules, 1993 and rule 1802 of the Railway Estt. Code, Vol.II.

**Rule 66-Retirement on completion of 30 years qualifying service-** (1) At any time after a railway servant completed thirty years qualifying service (a) he may retire from service; or (b) he may be required by the appointing authority to retire in the public interest, and in the case of such retirement the railway servant shall be entitled to a retiring pension:

Provided that (i) a railway servant shall give a notice in writing to the appointing authority at least three months before the date on which he wishes to retire; and (ii) appointing authority may also give a notice in writing to a railway servant at least three months before the date on which he is required to retire in the public interest or three months pay and allowances in lieu of such notice: Provided further that where the railway servant giving notice under clause (i) of the first proviso is under suspension, it shall be open to the appointing authority to withheld permission to such railway servant to retire under this rule.

A railway servant who has elected to retire under this rule and has given the necessary intimation to that effect to the appointing authority, shall be precluded from withdrawing his election subsequently except with the specific approval of such authority:

Provided that the request for withdrawal shall be within the intended date of his retirement.

**Rule 67- Retirement on completion of 20 years qualifying service -** (1) At any time after a railway servant has completed twenty years qualifying service, he may, by giving notice of not less than three months in writing to appointing authority retire from service.

The notice of voluntary retirement given under sub-rule (1) shall require acceptance by the appointing authority:

Provided that where the appointing authority does not refuse to grant the permission for retirement before the expiry of the period specified in the said notice, the retirement shall become effective from the date of expiry of the said period.

A railway servant, who has elected to retire under this rule and has given the necessary notice to that effect to the appointing authority, shall be precluded from withdrawing his notice except with the specific approval of such authority: Provided that the request for withdrawal shall be made before the intended date of his retirement.

This rule shall not apply to a railway servant who retires from railway service for being absorbed permanently in an autonomous body or a public sector undertaking to which he is on deputation at the time of seeking voluntary retirement.

Both in the above cases orders permitting /requiring a railway servant to retire after completing 30/20 years qualifying service should, as a rule, not be issued until/after the fact, that the railway servant has indeed completed the qualifying service of thirty/twenty years, has been verified in consultation with the Accounts Officer.

**Amount of pension** (1) In the case of a railway servant retiring in accordance with the provisions of these rules before completing qualifying service of **ten years**, the amount of service gratuity shall be calculated at the rate of half month's emoluments for every completed six-monthly period of service.

(1A) The Grade Pay, Running allowance in case of Running staff and non-practising allowance in case of Railway doctors admissible on the date of retirement shall also be treated as emoluments for the purpose of sub-rule (1). But this does not include special allowance, personal pay, deputation (duty) allowance, etc.

(2) In the case of a railway servant retiring in accordance with the provisions of these rules

after completing the qualifying service of not less than ten years, the **amount of pension shall be calculated at fifty per cent** of emoluments or average emoluments, whichever is more beneficial to him, subject to a **minimum of three thousand and five hundred rupees per mensem and a maximum of forty-five thousand rupees per mensem.** (Authority: Railway Board's letter No. 2011/F (E) III/1(1)9 dated 23.09.13).

(2A) In addition to pension admissible in accordance with the provisions of sub-rule (2), after completion of eighty years of age and above, the additional pension shall be payable to a retired railway servant in the following manner, namely:

Age of Pensioner	Additional pension
From 80 years to less than 85 years	20 per cent of basic pension
From 85 years to less than 90 years	30 per cent of basic pension
From 90 years to less than 95 years	40 per cent of basic pension
From 95 years to less than 100 years	50 per cent of basic pension
50 per cent of basic pension	50 per cent of basic pension

(Authority: Railway Board's letter No. 2011/F (E) III/1(1)9 dated 23.09.13).

In calculating the length of qualifying service fraction of a year equal to three months and above shall be treated as a completed one half year and reckoned as qualifying service.

### Retirement gratuity or death gratuity

(1) (a) In the case of a railway servant, who has completed **five years** qualifying service and has become eligible of service gratuity or pension under rule 69, shall, on his retirement, be granted retirement gratuity equal to one-fourth of his emoluments for each completed six monthly period of qualifying service subject to a maximum of sixteen and one-half times the emoluments and there shall be no ceiling on reckonable emoluments for calculating the gratuity.

(b) If a railway servant dies while in service, the amount of death gratuity shall be

paid to the family in the manner indicated in the Table below: -

Length of qualifying service	Rate of gratuity
(i) Less than one year	2 times of emoluments
(ii) one year or more but less than 5 years	6 times emoluments
(iii) 5 years or more but less than 20 years	12 times of emoluments
(iv) 20 years or more	Half of emoluments for every completed six monthly period of qualifying service subject to maximum of thirty-three times emoluments provided that the amount of death gratuity shall in no case, exceed one lakh rupees.

Provided that the amount of retirement gratuity or death gratuity payable under this rule shall in no case, exceed rupees **ten lakh.**

(Authority: Railway Board's letter No. 2011/F (E) III/1(1)9 dated 23.09.13).

(2) If a railway servant, who has become eligible or a service gratuity or pension, **dies within five years from the date of his retirement from service** including compulsory retirement as penalty and the sums actually received by him at the time of his death on account of such gratuity or pension including ad-hoc increase, if any, together with the retirement gratuity admissible under sub-rule (1) and the commuted value of any portion of pension commuted by him are less than the amount equal to twelve times of his deficiency may be granted to his family in the manner indicated in sub-rule (1) of rule 71.

(3) The emoluments for the purpose of gratuity admissible under this rule shall be reckoned in accordance with rule 49;

Provided that if the emoluments of a railway servant have been reduced during the last ten

months of his service otherwise than as a penalty the average emoluments as referred to in the 50 shall be treated as emoluments.

Provided further that the dearness allowance admissible on the date of retirement or death, as the case may be, shall also be treated as emoluments for the purpose of this rule.

(Authority: Railway Board's letter No. 2011/F (E) III/1(1) 9 dated 23.09.13).

**Invalid Pension-** (Rule 55 of Railway Services (Pension) Rules, 1993) - (1) Invalid pension may be granted to a railway servant who retires from service on account of any bodily or mental infirmity, which permanently incapacitates him for the service.

(2) A railway servant applying for an invalid pension shall submit a medical certificate, from a duly constituted medical authority, of his permanent incapacity for service due to bodily or mental infirmity.

(3) Where the medical authority referred to in sub-rule (2) has declared a railway servant fit for further service of less laborious character than that which he had been doing he should, provided he is willing to be so employed, be employed on a lower post and if there be no means of employing him even on a lower post, he may be admitted to invalid pension.

(4) A railway servant may, if he considers that he is not in a fit state of health to discharge his duties, apply to the appropriate authority for retirement on invalid gratuity or pension.

**Compensation pension** (Rule 63 of Railway Services (Pension) Rules, 1993).

(1) If a Government servant is selected for discharge owing to the abolition of his permanent post, he shall, unless he is appointed to another post the conditions of which are deemed by the authority competent to discharge him to be at least equal of those of his own, have the option -

(a) of taking compensation pension to which he may be entitled for the service he had rendered, or

(b) of accepting another appointment on such pay as may be offered and continuing to count his previous service for pension.

(2) (a) Notice of at least three months shall be given to Government servant in permanent employment before his services are dispensed with on the abolition of his permanent post.

(b) Where notice of at least three months is not given and the Government servant has not been provided with other employment on the date on which his service are dispensed with, the authority competent to dispense with his services may sanction the payment of a sum not exceeding the pay and allowances for the period by which the notice actually given to him falls short of three months.

(c) No compensation pension shall be payable for the period in respect of which he receives pay and allowances in lieu of notice.

(3) In case a railway servant is granted pay and allowances for the period by which the notice given to him falls short of three months and he is re-employed before the expiry of the period for which he has received pay and allowances he shall refund the pay and allowances so received pay and allowances he shall refund the pay and allowances so received for the period following his re-employment.

(4) If a railway servant who is entitled to compensation pension accepts instead another appointment under the railways and subsequently becomes again entitled to receive a pension of any class, the amount of such pension shall not be less than what he could have claimed if he had not accepted the appointment.

**Compulsory retirement pension** (Rule 64 of Railway pension Rule)

(1) A Railway servant compulsorily retired from service as a penalty may be granted, by the authority competent to impose such penalty, pension or gratuity or both at a rate not less than two-thirds and not more than full compensation pension or gratuity or both



admissible to him on the date of his compulsory retirement.

(2) Whenever, in the case of a railway servant the President passes an order (whether original, appellate or in the exercise of power of review) awarding a pension less than the full compensation pension admissible under these rules, the Union Public Service Commission shall be consulted before such order is passed.

(3) A pension granted or awarded under sub-rule (i) or, as the case may be, under sub-rule (2), shall not be less than **three thousand five hundred rupees** per mensem. (Authority: Railway Board's letter No. 2011/F (E) III/1(1)9 dated 23.09.13)

**Compassionate allowance** (Rule 65 of Railway Pension Rules) (1) A railway servant who is dismissed or removed from service shall forfeit his pension and gratuity:

Provided that the authority competent to dismiss or remove him from service may, if the case is deserving of special consideration, sanction a compassionate allowance not exceeding two-thirds of pension or gratuity or both which would have been admissible to him if he had retired on compensation pension.

(2) A compassionate allowance sanctioned under the proviso to sub-rule (1) shall not be less than **three thousand five hundred rupees** per mensem. (Authority: Railway Board's letter No. 2011/F (E) III/1(1)9, dated 23.09.13).

#### **Extraordinary Pension:**

This is payable under Railway Services (Extraordinary Pension) Rules, 1993 to all railway servants, other than those to whom the Employees Compensation Act, 1923 (8 of 1923) applies (subject to para 6 of Schedule III) whether their appointment is permanent or temporary, on the scale of pay

Provided that nothing contained in these rules shall apply to the railway or fixed pay or piece-work rates who are under the rule making control of the President of India in case of accident, injury, disease:

accident means- (i) a sudden and unavoidable mishap; or (ii) a mishap due to an act of devotion to duty in an emergency arising otherwise than by violence out of and in the course of service;

(2) in the case of disease, the date on which the Medical Board reports or such earlier date as may be fixed by the President with due regard to the opinion of the Medical Board;

(3) 'injury' means an injury as mentioned in Scheduled I, Permanent Total Disablement shall be deemed to result from every injury specified in Part I of Schedule I or from any combination of injuries specified in Part II of that Schedule where the aggregate percentage of loss of earning capacity (percentage of disability) amounts to hundred per cent or more. Every injury specified in Part II of Scheduled I shall be deemed to result in Permanent Partial Disablement.

(4) disease means a disease as is mentioned in Schedule II;

(5) 'Pay' means basic pay as defined in clause (i) of rule 1303 of the Indian Railway Establishment Code which a person was drawing on the date of his death or injury and also includes non-practicing allowance granted to Medical Officers in lieu of Private Practice;

Provided that in the case of a person remunerated by piece-work rates, pay means the average earnings of the last six months ending with the date of his death or injury;

(i) in the case of accident or violence, the actual date on which the injury is suffered or such date, not being later than the date of the

report of the Medical Board, as the President may fix; and (ii) in the case of disease, the date on which the Medical Board reports or such earlier date as may be fixed by the President with due regard to the opinion of the Medical Board. servants appointed on or after the 1st day of January, 2004.

**Family Pension Scheme for railway servants, 1964:** - Rules 75 of Railway Servants (Pension) Rules, 1993 provides that

(1) The provisions of this rule shall apply: -  
 (a) to a railway servant entering service in a pensionable establishment on or after the 1<sup>st</sup> January, 1964; and  
 (b) to a railway servant who was in service on the 31<sup>st</sup> December, 1963 and came to be governed by the provisions of the Family Pension Scheme for railway employees, 1964, contained in the Railway Board's letter No. F (P) 63 PN-1/40 dated the 2<sup>nd</sup> January 1964 as in force immediately before the commencement of these rules.

**(Note: -** The provisions of this rule have also been extended from 22<sup>nd</sup> September 1977, to railway servants on pensionable establishments who retired or died before the 31<sup>st</sup> December, 1963 and also to those who were alive on that date but had opted out of the 1964 Scheme).

(2) Subject to the provisions of sub-rule (18) and without prejudice to the provisions contained in sub-rule (4), where a railway servant dies,

**(Authority: Railway Board's letter No. 2011/F (E) III/1(1)9 dated 23.09.13)**

(a) after completion of one year of continuous service; or

(b) before completion of one year of continuous service, provided the deceased railway servant concerned immediately prior to his appointment to the service or post was examined by the appropriate medical authority and declared fit by that authority for railway service; or

(c) after retirement from service and was on the date of death in receipt of a pension, or

compassionate allowance, referred to in these rules,

the family of the deceased shall be entitled to family pension under the Family Pension Scheme for Railway Servants, 1964, the amount of which shall be determined at a uniform rate of **thirty percent of basic pay Plus Grade pay subject to a minimum of three thousand and five hundred rupees per mensem** and a maximum of twenty-seven thousand rupees per mensem.

Provided that in no case a family pension in excess of the maximum specified under this rule shall be allowed.

(3) In addition to family pension admissible in accordance with sub rules (2), (3) and (4), after completion of eighty years of age and above, additional family pension shall be payable in the following manner:

**(Authority: Railway Board's letter No. 2011/F (E) III/1(1)9 dated 23.09.13).**

Sl.no.	Age of Pensioner	Additional Pension
1	From 80 years to less than 85 years	20% of Basic Pension.
2	From 85 years to less than 90 years	30% of basic pension
3	From 90 years to less than 95 years	40% of basic pension
4	From 95 years to less than 100 years	50% of basic pension
5	100 years or more	100% of basic pension

(4) "(i) (a) Where a railway servant, who is not governed by the Employees' Compensation Act, 1923 (8 of 1923), dies while in service after having rendered not less than seven years' continuous service, the rate of family pension payable to the family shall be equal to fifty per cent. of the Pay plus Grade Pay last drawn and the amount so admissible shall be payable from the date following the date of death of the railway servant for a period of ten years.

(b) in the event of death of a railway servant after retirement, the family pension as determined under sub clause (a) shall be payable for a period of seven years, or for a period up to the date on which the retired deceased railway servant would have attained the age of sixty-seven years had he survived, whichever is less:

Provided that in no case the amount of family pension determined under sub-clause (b) shall exceed the pension authorised on retirement from railway service:

Provided further that where the amount of pension authorised on retirement is less than the amount of family pension admissible under sub-rule (2), the amount of family pension determined under this clause shall be limited to the amount of family pension admissible under sub-rule (2).

**Explanation.** - For the purpose of this sub-clause, pension authorised on retirement includes the part of the pension which the retired railway servant may have commuted before death.

**(Authority: Railway Board's letter No. 2011/F (E) III/1(1)9 dated 23.09.13)**

(ii) (a) Where a railway servant, who is governed by the Workmen's Compensation Act, 1923 (8 of 1923), dies while in service after having rendered not less than seven years continuous service, the rate of family pension payable to the family shall be equal to fifty percent of the pay last drawn or one and a half times the family pension admissible under sub-rule (2), whichever is less.

(b) The family pension so determined under sub-clause (a) should be payable for the period mentioned in clause (i):  
Provided that where a compensation is not payable under the aforesaid Act, the pension sanctioning authority shall send a certificate to the Accounts Officer to the effect that the family of the deceased railway servant shall

be paid family pension on the scale, and for the period, mentioned in clause (i).

(iii) After the expiry of the period referred to in clause (i), the family, in receipt of family pension under that clause or clause (ii) shall be entitled to family pension at the rate admissible under sub-rule (2).

### **Joining Time Rules (Estt.-I/Para 1101)**

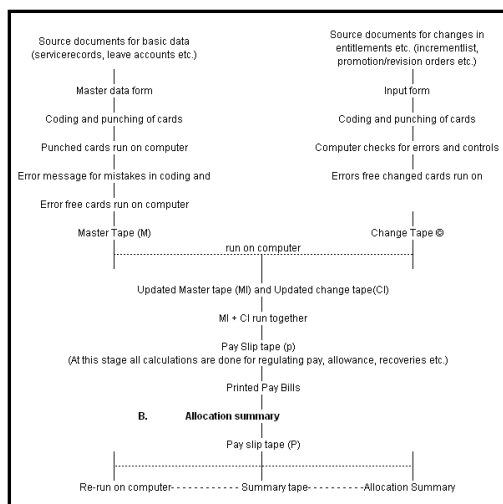
- Joining time shall be granted to a railway servant on transfer in public interest to enable him to join the new post either at the same or a new post.
- No joining time is admissible in the case of temporary transfer for a period not exceeding 180 days.
- For appointment to posts under the railways on the results of a competitive examination and/or interview opened to railway servants and others, railway servants and State Government employees will be entitled to joining time.
- Temporary railway employees who have not completed three years of regular continuous service, though entitled to joining time, would not be entitled to joining time pay.
- The joining time shall commence from the date of relinquishment of charge of the old post if the charge is made over in the forenoon or the following date, if the charge is made over in the afternoon.
- Not more than one day's joining time shall be allowed to a railway servant to join a new post within the same station or which does not involve change of residence from one station to another. For this purpose the term same station will be interpreted to mean the area falling within the jurisdiction of the municipality or corporation including such of sub-urban municipalities, notified areas or cantonments as are continuous to the named municipality etc.
- In the cases involving transfer from one station to another and also involving change of residence, the Railway servant shall be allowed joining time with reference to the distance between the old Headquarters and the new Headquarters by direct route and ordinary mode(s) of travel as indicated below:
  - In case of change of Headquarters between 1000 kms or less joining time admissible 10 days;

- In case of change of Headquarters more than 1000 kms joining time admissible 12 days;
- In case of change of Headquarters more than 2000 kms Joining Time admissible 15 days except in cases of travel by air for which the maximum will be 12 days.
- Joining time beyond the prescribed limits can be extended maximum upto 30 days by the Heads of Departments and on Divisions, by Divisional Railway Managers in the case of Gr.-C and Gr.-D staff and beyond 30 days by the Ministry of Railways, the guiding principle being that the total period of joining time should be approximately equal to 8 days for preparation plus reasonable transit time plus holidays, if any, following the extended joining time.
- While computing the transit time, allowance could be made for the time unavoidably spent due to disruption of transport arrangement caused by strike or natural calamities.
- **Crediting leave account with unutilized joining time**-when a railway servant joins a new post without availing of the full joining time, the no. of days of joining time as admissible under this rule subject to the maximum of 15 days, reduced by the no. of days actually availed of, shall be credited to his leave account as leave on average pay.
- The credit of the joining time to the leave account will be subject to the usual restriction on accumulation of leave on average pay in the leave account.
- No special casual leave in lieu of joining time will be admissible.
- **Joining Time Pay and Allowances**-a railway servant on joining time shall be regarded as on duty during that period and shall be entitled to be paid joining time pay equal to the pay which was drawn before relinquishment of charge in the old post. He shall be entitled to dearness allowance, if any, appropriate to the joining time pay, compensatory allowance like City Compensatory Allowance, House Rent Allowance as applicable to the old station from which he was transferred, but not conveyance allowance or permanent travelling allowance.

## **Computerised Pay Roll System-** (Source: RAM-203)

Basic features of the system-

- A Master File of the employees is built up on tape which under the tag of identification number allotted to each individual by appending a check digit to his Provident Fund Account Number, carries details like name, designation, pay scale, rates of pay and allowance, standard deductions like Provident Fund subscription, refund of advance, house rent, income tax etc.
- The data is initially collected from service records and other connected documents and entered on 'Master Data Forms' for purpose of punching and verification.
- Cards are verified from these data forms and then run on the computer to detect mistakes in coding and punching. A check sheet is produced highlighting these errors for manual check and rectification.
- After all the cards are found error-free, they are taken on magnetic tape, which becomes the Pay-Roll Master. For transfer of staff to and from the bill units as well as for changes in the entitlements of an employee to pay and allowances due to increment, revision of pay etc. necessary entries are made in the coding sheets by the Personnel Branch;
- The Coding Sheets are sent to Data Processing Branch where after a preliminary scrutiny in regard to their completeness and conformity with the prescribed format.
- The sheets are punched in the form of cards. The punched cards are run through the computer for general validity and agreement of the control totals developed manually with those worked out through the computer. In this process of scrutiny the punched cards are also written on a tape called the 'Change Tape'.
- The change tape and the previous month's Master Tape are then run together for updating the latter with the changes as per Change Tape.
- The pay sheet of individual employee is printed from pay slip tape, which is created by running the updated Master Tape with the Change Tape.
- For PF accounting two basic files (Provident Fund Master File and Provident Fund Transaction File) are maintained on tape. To start with, the balances in the provident fund account of each individual employee as per check sheet are punched in cards



### **Audit check on Computerised Pay Roll System (Source: RAM-203)**

- While check of computer programme is not at present undertaken, audit should be conducted by checking the accuracy of the source documents and compilation of the output with the source documents.
- The Provident Fund Transaction file containing the monthly transaction in respect of each PROVIDENT FUND NUMBER is updated for correcting errors or posting un-posted items through a card input. Since in this updating programme manual intervention is possible, the list of updated items should be reviewed in audit to ensure that corrections made are for genuine errors and un-posted items only.

### **Audit Check of Pay Bills**

- Audit should verify to see that—
  - there is proper sanction to the post held by the employee.
  - the employee is entitled to the amount paid to him.
  - the allocation of charges has been correctly made.
  - checks against budget provision are carried out properly.
  - deductions for PF subscription are in accordance with provisions of the Provident Fund Rules and the deductions are traced into the recovery sheets.
  - the amount has been correctly acknowledged by the employee.

- the payment has been witnessed by a competent authority.
- the sanctioned cadre is not exceeded.
- Wherever the preparation of memorandum of differences has been dispensed with under computerised pay bill system, the check of entitlement of the employee to the amount paid to him should be exercised with reference to the change statement available in the Accounts Office as under—
  - the pay in respect of each employee under check should be compared with the pay in previous month's bill and the difference if any, tallied with the change statement; the correctness of preparation of the source documents checked with reference to the initial documents during inspection of the respective executive office; and
  - with a view to ensuring that there is no un-authorised insertion of name in the pay bill, all the employees appearing in the pay bill, selected for audit should be paired with the names in the previous month's bill and the new names if any, traced into the change statement.
- The audit of pay bills should be further supplemented by check of the following documents, which are generated with the pay roll operation to see that—
  - the coding sheets are received in respect of all bill units;
  - appropriate corrective action is taken in all cases included in the Error List and Exception Report;
  - the various control totals and hush totals are properly agreed.
- It should also be seen by audit that gross amount of the bill is allocated to the Heads and Sub-heads of Accounts concerned and that proper allocation of the deductions has been recorded on the bill. The correctness of computer generated abstract of allocation and the summary showing the net amount for which the pay bill is passed for payment should be checked as under—
  - one pay bill should be selected for complete check of allocation and the net amount for which check is drawn, by manually transcribing entries in the individual pay sheets under the various

details and totals struck for comparison with the computer generated total; and

○ in other cases following checks should be exercised-

- on the accuracy of the account head to which the amount has been debited/credited; and
- where manual alterations have been made in the printed pay sheets by Personnel/Accounts Department with reference to such alterations.

### **Audit of Travelling Allowance Bill (Source: RAM-222)**

Audit should see that

- Travel by air, if any, is covered by the rules or special sanction thereof;
- Whether officers who countersign their own bills do not abuse this privilege;
- Whether countersigning officers duly carry out their responsibilities as such;
- Whether a change of Headquarters in certain instances would result in a deduction of travelling allowances;
- The possibility of reducing the no. of Group D staff accompanying an officer on tour;
- The desirability of granting a fixed conveyance allowance where the charges for conveyances are heavy;
- The justification for the rate of motor car allowance which may have been granted in comparison with the amount of travelling to be done;
- Whether arrangements exist to deface travelling allowance journals accompanying travelling allowance bills in a proper manner to prevent them from being passed a second time for payment.

### **Audit Check of Contingent Vouchers (Source: RAM-227)**

It should be seen inter-alia that

- Each class of expenditure:
  - Is a proper charge against the grant concerned;
  - Has received such sanction as is necessary;
  - Has been incurred by an officer competent to incur it;
- No canon of financial property is infringed;
- The bill is in proper form;

- The amount in words and figures agree;
- The classification is correctly recorded;
- Rates are apparently not extravagant;
- No bills are paid from imprest cash which ordinarily should have been submitted for pre audit and payment like other bills; and
- Bills containing charges for miscellaneous supplies bear a certificate that the articles have been received in good condition and entered in the stock account.

### **Audit of Provident Fund Accounts (Source: RAM -237)**

- The figures in the deduction list accompanying the pay bills of the employees whose accounts are to be checked should be traced into the relevant ledger accounts;
- The same deduction list into which the recoveries of PF have been traced at the time of check of the pay bills may be traced in the PF ledgers with a view to avoid the possibility of amounts in the recovery sheets being inflated;
- It should be seen
  - Whether the contribution credited to the account in the previous half-year is correct;
  - Whether the closing of the account and the calculations of interest for the previous year have been correctly done according to the applicable rate of interest;
  - Whether recoveries on account of advances are being regularly made in accordance with the rules;
  - In case of new accounts, whether the employee is eligible to subscribe to the fund.
- Where under the computerised system of Provident Fund accounting the Provident Fund ledger is printed collectively at the end of the financial year, audit should trace the entries in the deduction list for the month of March;
- It should also be seen—
  - The contribution credited to the account in the previous half year is correct;
  - The closing of the account and calculation of the interest for previous half-year have been correctly done according to the rate of interest applicable to the person concerned;
  - Recoveries on account of advances are being regularly made as per rules;

- In the case of new accounts the employee is eligible to subscribe to the fund; and
- The amounts of incentive onus credited, if any, to the accounts of a subscriber have been correctly worked out and the conditions prescribed for the grant of such bonus are fulfilled.
- Temporary withdrawals from Provident Fund should be checked to see that the withdrawals are for the purposes as specified in the rules and sanctioned by the competent authority;
- The debits for temporary withdrawals audited during the month should also be traced into PF ledgers;
- If under the computerised system PF ledgers are printed only at the end of the year instead of monthly as under the manual system, the tracing of debits in the PF ledgers may be done as an annual item for all cases of temporary withdrawals audited during the year;
- In the audit of final withdrawal of Provident Fund audit should check the concerned ledger account as well as a check of transactions as recorded in the ledger for the last two years with those in the deduction sheets, variation memos.
- Audit should see that contribution to the contributory SRPF account has been correctly calculated upto the date of termination of service and that interest has been allowed upto the date of tender of payment or upto the end of the six month after the month in which the subscriber left the service or died, whichever is earlier; that there is a clear certificate to the effect that no amount is outstanding against the person concerned.
- Cases of delay in the disposal of claims may be specially brought to the notice of the accounts department.
- In respect of computerised Provident Fund Accounts, it should be ensured during audit of PF settlement cases that the opening balances on the date of computerisation were correctly carried forward from manually maintained ledgers to the computer printed PF Ledgers.

### **Audit of Pension Cases**

[Source Para 249 RAM, & Chapter 6 Section III – para 3.6.12 MSO (Audit)].

It should be seen first in Audit that various stages for the completion of pension papers as laid down in Rule 79 of Railway Services (Pension) Rules, 1939 have been followed.

Audit of Pension cases should start with following checks primarily:

- 1) Whether the date of birth, date of appointment, date of confirmation, date of superannuation, break in service, if any, or dies non period, boy service, if any, foreign service, particulars of submission of nomination papers in respect of Pension/Gratuity and Provident Fund, thumb impressions are recorded/embodyed in the first page of the Service Book.
- 2) To verify that there is no dispute in the claim of family pension & gratuity as per nomination paper.
- 3) To ensure that persons nominated in the nomination papers are authorized and valid under rule. The name of the nominee(s) are specific and there is no ambiguity.
- 4) If there is no authorized/valid nomination paper, whether it is covered by valid legal documents.
- 5) Nomination of PF and Group Insurance Scheme is also to be recorded in the service book.
- 6) In case boy service whether specific entry has been made in this regard. The period is not counted for pension.
- 7) Whether annual service verification certificates with reference to pay bills are regularly recorded and are continuous and incorporate non qualifying service period viz. dies non period, Leave without Pay, overstayal of joining time in the Service Book. There shall be no period remained unverified. Service rendered as apprentice except Special Class Railway Apprentice shall not be treated as qualifying service.
- 8) The service should be verified by the Head of the Office in case of Non Gazetted Officers and by the Accounts Officer in case of Gazetted Officeres.
- 9) The signature of the retiring railway servants should also be incorporated in the service book.

10) Whether service after completion of 25 /55 years of service have been verified completely and duly recorded in the Service Book.

11) To see that the retirement process was started before 2 years of retirement and a notification regarding retirement was issued well in advance of date of retirement.

12) Whether computation of Qualifying service has been made strictly as per rules (Rule 20 to 48 of Rly. Services (Pension) Rules, 1993 duly considering the leave without pay, break/interruption in service, military service, service rendered in other departments, period of suspension etc.).

13) Special attention may be given to re-employed Railway servant and the period of regularisation.

14) To verify the entire service book at a glance to ascertain whether any important recordings noted in the Service Book have been taken into account while calculating average emolument and Pension & gratuity.

15) Correctness of calculation of average emoluments drawn during last ten months of service may be verified meticulously.

16) Correctness of computation of provisional pension and gratuity with reference to Qualifying service may be verified.

17) Recovery amount, if any, to be recovered from gratuity should be verified. Whether recovery of 10% of gratuity or minimum Rs.1000/- have been made from the gratuity pending finalization of any recovery.

18) To see whether the full amount of retirement gratuity, death gratuity or special contribution to provident fund, as the case may be, has been withheld in case where a railway accommodation is not vacated after retirement of the railway servant.

19) To see that period of family pension applicable has been correctly noted in the Pension Paper with reference to the date of birth of the children.

20) Whether all leaves are updated. Some test checks may also be applied for ascertaining accuracy of calculation for the purpose calculation of Leave Salary encashment.

21) To see that authorisation of pension and gratuity by the Accounts Officer is made invariably.

**Anticipatory/Provisional Pension:**

1) It may be seen that amount drawn is as per Pension Payment Order,

2) Pension is not exceeded beyond six months without the order of competent authority.

3) No Provisional or anticipatory pension is drawn after passing final pension order.

4) That all the prescribed certificates are enclosed.

**Commutation of Pension:**

It should be seen in audit that the commuted values are correctly calculated and percentage of commutation is as per prescribed rate. All other checks are to be made as described in preceding paragraphs.

**Audit Check of Leave Accounts** (Source: RAM -228)

Audit should bring to notice cases-

- Where any attempt is made to evade the principles of leave rules although there may be no technical evasion, as for example when an employee entitled only to four months leave on average pay at a time rejoins duty and very shortly afterwards, again proceeds on another four months leave on average pay.

- In case of leave in India, in addition to the check of leave salary on the basis of the statement regarding calculation of average pay, absentee statement, memorandum of differences etc., the leave salary of persons appearing in the bills of the month selected for audit during local inspections should be verified from the original service records and leave accounts.

- The check of leave accounts should be a complete one from the beginning or from the last entry checked to the date of scrutiny and should cover cases of all employees due to retire prior to the end of the year in which next inspection is due; a record of the accounts checked during each inspection being maintained for the purpose.



### **Audit Check of Rents of Residential Building (Source: RAM -215)**

Railways provide quarters to its staff at places where the conditions are such that either private enterprise does not meet the demand of housing the staff or it is necessary to provide quarters near the place of their work. Each Railway Administration is required to maintain a list of all buildings, whether residential or service. Railways are also required to prepare rent rolls of all residential buildings indicating the type of quarters, name and designation of the occupant, emoluments of the occupant, period of occupation and rent recoverable etc. Compilation of such information, besides ensuring regular recovery of rent, also helps in monitoring the vacant quarters for further allotment to eligible employees.

Under the simplified procedure for preparation of rent rolls and maintenance of rent registers, rent rolls are prepared only for one month in the year, April or May and for the remaining months a statement of variations in the recovery of rent, if any, is annexed with the pay bill. Similarly instead of posting the recovery of rent in the rent registers from month to month in respect of each building, the total recoveries in respect of all the quarters forming part of a particular pool are posted for comparison of the capital outlay with the rent return in each pool.

The rent rolls/variation memo pertaining to the pay bills taken up for audit should be examined to see that the rents are correctly recovered under the rules obtaining on the Railway. The rules generally provide that 10 per cent of emoluments or the assessed rent whichever is less, is recoverable. Where the limit of 10 per cent of emoluments is operative, it should be ensured in audit that the amount to be recovered is recalculated with every change in the emolument. Cases in which the rent recovery is considerably less than the assessed rent should be reviewed. During audit, an auditor should see that-

- The quarter allotted to a particular officer is occupied by him and not left vacant;
- If it is allotted to any other officer there is no loss of rent on account of such allotment;
- Cases of quarters remaining vacant for unduly long periods have been examined and appropriate action taken by the Administration; and
- Special orders regarding penal rent etc., are implemented wherever warranted.

### **Suspense Accounts**

Under Suspense Heads, are recorded transactions which cannot be booked to final heads of account for any reason. Accounts operated in connection with inventories, such as Materials held in Stock and Works-in-process (Workshops) etc. and sundry debtors/creditors accounts are also treated as Suspense Heads of account. Transactions in the Suspense Heads are held temporarily pending clearance by payment or recovery or adjustment to the final heads of account.

Each transaction should be recorded in the Suspense Register in sufficient detail, indicating full reference to the connected vouchers etc., so that there is no difficulty in tracing the source of the item at any time, and no item becomes inefficient merely due to non-availability of detailed particulars. Section Officers(Accounts) should scrutinise each item and ensure that only such items are placed in Suspense Accounts which have to be kept there unavoidably in terms of the guidelines given above, and that the items are neatly posted with a the detailed particulars.

### **Audit Check of Suspense Accounts**

- Auditor should check the accuracy of the balances shown in the register;
- Several records showing the details of debits and credits to the suspense heads should be checked in accordance with the rules laid down in the Indian Railway code for the Accounts Department;
- It should be seen that proper action is being taken to expedite the clearance of outstanding items and that no item which prima facie could

be debited or credited to final head is allowed to stand over in the books-a tendency to do, which some times manifests itself during the closing months of the year in order to avoid excesses over allotments.

# Illustrations

## Illustration I

(Based on Para 4.3.1 of Audit Report 2006)

### **Eastern Railway: Loss due to non-allotment of railway quarters.**

Railways provide quarters to its staff at places where the conditions are such that either private enterprise does not meet the demand of housing the staff or it is necessary to provide quarters near the place of their work. Each Railway Administration is required to maintain a list of all buildings, whether residential or service. Railways are also required to prepare rent rolls of all residential buildings indicating the type of quarters, name and designation of the occupant, emoluments of the occupant, period of occupation and rent recoverable etc. Compilation of such information, besides ensuring regular recovery of rent, also helps in monitoring the vacant quarters for further allotment to eligible employees.

- Audit scrutiny of records of four Divisions and two Workshops of Eastern Railway revealed that quarters as indicated below remained vacant during the years 2000-01 to 2004-05:

Year	Type of Quarters					Total
	Type I	Type II	Type III	Type IV	Type V	
2000-01	2310	279	110	23	18	<b>2740</b>
2001-02	2689	325	123	21	21	<b>3179</b>
2002-03	3259	375	190	40	27	<b>3891</b>
2003-04	4008	472	229	68	33	<b>4810</b>
2004-05	5017	703	259	103	53	<b>6135</b>

- The above position indicates that the number of vacant quarters are increasing every year. Such a large number of quarters was lying vacant primarily due to poor repair and maintenance as the employees were unwilling to occupy the quarters while private houses of better quality were available within their entitled house rent allowance. In addition, field offices were not informing the updated position of vacation of quarters to Divisional Authorities regularly, as a result of which vacant quarters could not be allotted to eligible employees.
- As a result of non/ deficient maintenance of residential quarters by the Railway Administration and non-allotment to the eligible employees, the Railway could not recover rent of Rs.1.08 crore and paid house rent allowance to the extent of Rs.16.57 crore, which could have been avoided.
- Thus, the failure of Railway Administration to maintain the staff quarters properly and allot them to eligible employees immediately on falling vacant has resulted in loss of Rs.17.65 crore.
- The matter was taken up with Railway Board in October 2005. Their reply has not been received so far (December 2005).

## **Questions**

1. Why a list of buildings is being maintained by Railways and what are items kept in it?
2. Why a large no. of quarters were lying vacant increasingly in each year? What was the total loss suffered by the Railway Administration?
3. State the processes through which this loss could be avoided.

**Illustration II**

(Based on Para 3.4.13 of Audit Report 2002)

**Western Railway: Misappropriation of cash due to delay in reconciliation of suspense account**

- As per provisions of Railway Accounts Code, money received by Railways is to be promptly paid into banks. The authorised Station Masters and Cashiers remit cash into banks along with duly filled Treasury Remittance Notes (challans) in three foils. The receiving bank authorities are required to write in words the amount received at the foot of each of the three foils, retain the third foil and return the first two to the Railway officials. These returned foils form the acknowledgement vouchers in support of remittances made (debit challans) with the banks and are forwarded to Financial Adviser and Chief Accounts Officer (FA&CAO) for reconciliation. Similarly, each bank with which Railways have transactions is required to send copies of daily main summaries along with challans (credit challans) to the nominated Focal point branch (since October 1993) who arrange to send them including their own credit challans to FA&CAO for verification on day-to-day basis.
- For this purpose, Railways operate a suspense head called Remittance into Banks. The amount deposited (as per debit challans) into banks by cashiers etc. are debited to this account and the cash acknowledged by the banks as advised by focal point branch through daily main summaries (along with credit challans) is credited to this account.
- This statement is required to be checked immediately on receipt with the acknowledged vouchers (debit challans). Any discrepancies noticed in the figures should be brought to the notice of the focal point bank by FA&CAO for rectification. The cash remittance notes which are not accounted for in these statements should be listed out in a register for watching their clearance. To ensure correct accounting of remittances by banks and reflecting correct suspense balances, the timely reconciliation of these challans statements is of paramount importance.
- There had been failure in timely and systematic reconciliation of this account in FA&CAOs office for the period from October 1993 to March 1997. Also, there were abnormal delays in locating mismatched items in respect of erratic monthly balances noticed during reconciliation.
- Failure in timely and systematic reconciliation and delays in detecting challans of unmatched credits created a situation vulnerable to manipulation, misappropriation and embezzlement. The matter was brought to the notice of Railway Administration in February 1998. In reply, Railway Administration stated (March 1998) that efforts were being made to pull up the arrears.
- During reconciliation of cash remittances made by Cash Office, Mumbai Division in respect of unpaid wages, a case of fraud was detected (April 2000) wherein it was noticed that the amounts acknowledged by banks in the challans sent by cashiers were greater than the amounts, as per challans, sent by banks through focal point. The cashier thus misappropriated the difference between the higher amount shown as deposited with the RBI and the lesser amount actually deposited. Amounts misappropriated aggregated Rs.0.52 crore. It was discovered at this juncture that amounts deposited on account of unpaid wages were being kept out of the ambit of reconciliation.
- Reconciliation of challans on account of unpaid wages was started from June 2000 onwards.
- In this connection, the following observations are made:
  - Despite assurance given to Audit (March 1998) on pulling up the arrears, reconciliation of transactions of Rs.57.44 crore pertaining to the period from October 1993 to March 1997 was not completed even as on 31 March 2001.
  - A major component of remittances i.e. unpaid wages deposited into the banks was not being reconciled till May 2000. This was brought in the ambit of reconciliation only from June 2000 after the fraud had been detected.
- Similar frauds can not be ruled out unless the system of reconciliation is observed scrupulously and arrears erased.
- Railway Administration while admitting delays and other lapses in reconciliation stated (September 2001) that:

- Very little reconciliation was carried out manually in stages in February 1998 and June 1999 of the transactions pertaining to 1993 to March 1997.
- The delay in reconciliation was due to failure of banks to give details in time and absence of a system of challan numbers.
- Reconciliation of unpaid wages has also been made a continuous process and short remittances, if any would be detected.
- Railway Administration has accepted delays and deficiencies in reconciliation.

### **Questions**

1. What is the process of reconciliation of the amount deposited (as per debit challans) into banks by cashiers etc and the cash acknowledged by the banks as advised by focal point branch through Daily Main summaries (along with credit challans)?
2. What is the name of the Suspense Head through which the reconciliation is being done?
3. Why such a vulnerable situation arose and what amount was mis-appropriated? Also state the amount and period for which reconciliation is in arrear at what point of time?
4. How this can be minimized?

**Solution to the Illustration-I**

1. Each Railway Administration is required to maintain a list of all buildings, whether residential or service. Railways are also required to prepare rent rolls of all residential buildings indicating the type of quarters, name and designation of the occupant, emoluments of the occupant, period of occupation and rent recoverable etc. Compilation of such information, besides ensuring regular recovery of rent, also helps in monitoring the vacant quarters for further allotment to eligible employees.
2. A large number of quarters were lying vacant primarily due to poor repair and maintenance as the employees were unwilling to occupy the quarters while private houses of better quality were available within their entitled house rent allowance. In addition, field offices were not informing the updated position of vacation of quarters to Divisional Authorities regularly, as a result of which vacant quarters could not be allotted to eligible employees. As a result of non-allotment of quarters to the eligible employees, the Railway could not recover rent of Rs.1.08 crore and paid house rent allowance to the extent of Rs.16.57 crore, which could have been avoided.
3. The list of buildings, besides ensuring regular recovery of rent, also helps in monitoring the vacant quarters for further allotment to eligible employees. It is the duty of the field offices to inform the updated position of vacation of quarters to Divisional Authorities regularly. This job was not being done regularly, as a result of which vacant quarters could not be allotted to eligible employees. Due to non/ deficient maintenance of residential quarters by the Railway Administration and non-allotment to the eligible employees, the Railway could not recover rent of Rs.1.08 crore and paid house rent allowance to the extent of Rs.16.57 crore, which could have been avoided. Thus, this leakage of revenue could be plugged if proper review of list of buildings was regularly done and the position of vacancy of Railway Quarters was intimated to the Divisional Authorities for allotment of the same to eligible employees.

### Solution to the Illustration-II

1. As per provisions of Railway Accounts Code, money received by Railways is to be promptly paid into banks. The authorised personnel remit cash into banks along with duly filled Treasury Remittance Notes (challans) in three foils. The receiving bank authorities are required to acknowledge the amount received in three foils, retain the third foil and return the first two to the Railway officials. These returned foils form the acknowledgement vouchers in support of remittances made (debit challans) with the banks and are forwarded to Financial Adviser and Chief Accounts Officer (FA&CAO) for reconciliation. Similarly, each bank with which Railways have transactions is required to send copies of daily main summaries along with challans (credit challans) to the nominated Focal point branch (since October 1993) who arrange to send them including their own credit challan to FA&CAO for verification on day-to-day basis.

For this purpose, Railways operate a suspense head called Remittance into Banks. The amount deposited (as per debit challans) into banks by cashiers etc. are debited to this account and the cash acknowledged by the banks as advised by focal point branch through daily main summaries (along with credit challans) is credited to this account. This statement is required to be checked immediately on receipt with the acknowledged vouchers (debit challans). Any discrepancies noticed in the figures should be brought to the notice of the focal point bank by FA&CAO for rectification. The cash remittance notes which are not accounted for in these statements should be listed out in a register for watching their clearance. To ensure correct accounting of remittances by banks and reflecting correct suspense balances, the timely reconciliation of these challans statements is of paramount importance.


2. For this purpose, Railways operate a Suspense Head called Remittance into Banks.

3. Railway Administration had accepted that delays and deficiencies in reconciliation was the cause of such kind of situation. During reconciliation of cash remittances made by Cash Office, Mumbai Division in respect of unpaid wages, a case of fraud was detected (April 2000) where a misappropriated aggregated amount of Rs.0.52 crore was involved. The amount acknowledged by banks in the challans sent by cashiers were greater than the amounts. At that juncture that amount deposited on account of unpaid wages was being kept out of the ambit of reconciliation. The transactions of Rs.57.44 crore pertaining to the period from October 1993 to March 1997 was not completed as on 31<sup>st</sup> March 2001.

4. These types of frauds can be ruled out if the system of reconciliation is observed scrupulously and arrears erased. The delay in reconciliation, as claimed by Railway Administration, was due to failure of banks to give details in time and absence of a system of challan numbers.

Slide 1

**Session 3**  
**Audit of Railway Establishments**  
**Fundamental Rules on Establishment and Provident Fund**




Training Module on Audit of Railways, Session 3

Slide 4

**Pay and Allowances**

- **Pay means**
  - the amount drawn monthly by a government servant as
  - the pay other than special or pay granted in view of his personal qualification or
  - to which he is entitled by reason of his position in a cadre; and
- **Overseas pay means**
  - special pay and the personal pay and
  - any other emoluments which may be specially classified as pay by the President.




4 Training Module on Audit of Railways, Session 3

Slide 2

**Learning Objective**

- In this session, the participants will be able to understand the basic concepts of the Establishment and Provident Fund Rules which will help them to focus on audit issues in the work context.




2 Training Module on Audit of Railways, Session 3

Slide 5

**Pay and Allowances**

- **Personal Pay means**
  - additional pay granted
    - to save a railway servant from a loss of substantive pay in respect of a permanent post other than a tenure post
    - due to a revision of pay or to any reduction of such substantive pay otherwise than as a disciplinary measure; or
    - in exceptional circumstances, on other personal consideration.




5 Training Module on Audit of Railways, Session 3

Slide 3

**Pay and Allowances**

- A railway servant shall
  - begin to draw the pay and allowance attached the post with effect from the date he assumed the duties of the post.
  - cease to draw them as soon as he ceases to discharge those duties.




3 Training Module on Audit of Railways, Session 3

Slide 6

**Pay and Allowances**

- **Time-scale Pay means**
  - pay which rises by periodical increments from a minimum to a maximum.
- Time-scales are said to be identical if the minimum, the maximum, the period of increments and the rate of increment of the time-scales are identical.




6 Training Module on Audit of Railways, Session 3



Slide 7

**Dismissal and Removal and Suspension**

- The pay and allowances of a Rly. employee cease from the date of the order of his removal or dismissal.
- A Rly. employee under suspension shall be entitled to-
  - a subsistence allowance
    - provided that where the period of suspension exceeds three months, the authority which made the order of suspension shall be competent to vary the amount of subsistence allowance for any period;




7 Training Module on Audit of Railways, Session 3

Slide 10

**Kinds of Travelling Allowances**

- Permanent or Consolidated Travelling Allowance,
- Conveyance allowance,
- Mileage allowance,
- Daily allowance,
- Actual cost of travelling.




10 Training Module on Audit of Railways, Session 3

Slide 8

**Travelling Allowance (TA)**

- For TA, Railway servants are divided as follows:
  - Below Rs.1100/-
  - Rs.1100/- and above but less than Rs.1400/- Below Rs.1100/-
  - Rs.1400/- and above but less than Rs.1900/-
  - Rs.1900/- and above but less than Rs.2800/-
  - Rs.2800/- and above but less than Rs.5100/-
  - Rs.5100/- and above.




8 Training Module on Audit of Railways, Session 3

Slide 11

**Permanent or Consolidated Travelling Allowance**

- Granted to a Rly. servant whose duties require him to travel extensively.
- In lieu of all other forms of Travelling Allowance
- May be drawn all the year round.
- Rly. servant has to be absent from his Hd. Qrs. on duty for more than 20 days in a month on the average,
- Shall not be drawn during leave, temporary transfer, or joining time.




11 Training Module on Audit of Railways, Session 3

Slide 9

**Travelling Allowance (TA)**

- Pay for the purpose of determining the entitlement of traveling allowance, means-
  - the 'pay' other than special pay or pay granted in view of his personal qualifications, overseas pay, special pay and personal pay.




9 Training Module on Audit of Railways, Session 3

Slide 12

**Conveyance Allowance**

- A monthly allowance granted to a railway servant who is required to travel extensively at or within a short distance from his Headquarters under conditions which do not render him eligible for daily allowance.
- May be drawn all the year round.
- May be drawn in addition to any other allowance.




12 Training Module on Audit of Railways, Session 3

Slide 13

### Daily Allowance (DA)

- A uniform allowance for each day of absence from Headquarter while on tour.
- On day (s) when the railway servant on tour is provided with free board and lodging, he will draw 1/4th of D.A for that (those) day (s).
- If he is provided with only free board, he will draw 1/2 of D.A for that (those) day (s).
- If he is provide with only free lodging, he will draw 3/4th of D.A for that (those) day (s).




13 Training Module on Audit of Railways, Session 3

Slide 16

### Joining Time

- Granted to a railway servant
  - on transfer in public interest.
- Not admissible
  - for temporary transfer for a period not exceeding 180 days.
- Temporary employees not completed three years service, though entitled to joining time
  - would not be entitled to joining time pay.




16 Training Module on Audit of Railways, Session 3

Slide 14

### Foreign Service and Deputation

- No railway servant may be transferred to foreign service against his will.
- When foreign service is sanctioned,
  - the pay which he shall receive in such service must be precisely specified in the order sanctioning the transfer.
- Leave earned during the period of such deputation will lapse on reversion to the parent office.




14 Training Module on Audit of Railways, Session 3

Slide 17

### Joining Time

- Unutilized joining time to be credited to leave account
  - subject to the maximum of 15 days,.
  - No special casual leave in lieu of joining time is admissible.
- Joining Time Pay and Allowances
  - a railway servant on joining time shall be regarded as on duty during that period




17 Training Module on Audit of Railways, Session 3

Slide 15

### State Railway Provident Fund (SRPF)

- Compulsory Subscribers
  - all railway servants shall subscribe to the fund.
  - Probationers to railway services, Group-A & Group-B shall subscribe from the date of appointment.
- Optional Subscriber
  - a railway servant who, is an apprentice on an agreement for fixed period and is confirmed in a permanent post may be permitted to subscribe.
  - A re-employed personnel may also be permitted to subscribe to the fund from date of his re-employment.




15 Training Module on Audit of Railways, Session 3

Slide 18

### Computerised Pay Roll System

- A master file of the employees is built up on tape
  - identification number allotted to each individual by appending a check digit to his Provident Fund Account Number,
  - carries details like name, designation, pay scale, rates of pay and allowance, standard deductions like Provident Fund subscription, refund of advance, house rent, income tax etc.
- The data, collected from related documents, entered on 'Master Data Forms' for purpose of punching and verification.
- Cards are verified from these data forms and then run on the computer to detect mistakes in coding and punching.




18 Training Module on Audit of Railways, Session 3

Slide 19

### Computerised Pay Roll System

contd.

- o The Coding Sheets are sent to Data Processing Branch.
- o The sheets are punched in the form of cards.
- o The punched cards are run through the computer for general validity and agreement of the control totals developed manually with those worked out through the computer.
  - In this process of scrutiny the punched cards are also written on a tape called the 'Change Tape'




19 Training Module on Audit of Railways, Session 3

Slide 22

### Audit check on Computerised Pay Roll System

- o While check of computer programme is not at present undertaken, audit should be conducted
  - by checking the accuracy of the source documents and
  - compilation of the output with the source documents.
- o The Provident Fund Transaction file is updated for correcting errors. The list of updated items should be reviewed in audit
  - to ensure that corrections made are for genuine errors and un-posted items only .




22 Training Module on Audit of Railways, Session 3

Slide 20

### Computerised Pay Roll System

contd.

- o The change tape and the previous month's Master Tape are then run together for updating.
- o The pay sheet of an individual employee is printed from pay slip tape, which is created by running the updated Master Tape.
- o For PF accounting
  - two basic files (Provident Fund Master File and Provident Fund Transaction File) are maintained on tape.



20 Training Module on Audit of Railways, Session 3


Slide 23

### Audit check of Pay Bills

- o Audit should verify to see —
  - proper sanction to the post held by the employee.
  - Entitlement of the amount paid to him.
  - Allocation of charges correctly made.
  - Checks against budget provision carried out properly.
  - Deduction for PF subscription are in accordance with provisions of the PF Rules and the deductions are traced into the recovery sheets.

Payment has been witnessed by a competent authority.

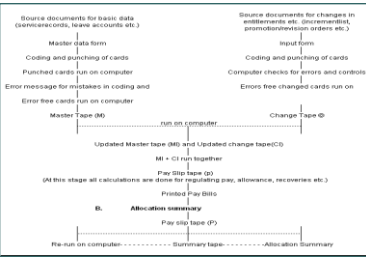
Sanctioned cadre is not exceeded.



23 Training Module on Audit of Railways, Session 3

Slide 21

### Computerised Pay Roll System contd.




21 Training Module on Audit of Railways, Session 3

Slide 24

### Audit check of Pay Bills

- Coding sheets are received in respect of all bill units;
- Appropriate corrective action is taken for Error List and Exception Report;
- Various control totals and hash totals are properly agreed;
- Gross amount of the bill is allocated to the Heads and Sub-heads of Accounts concerned and
- Proper allocation of the deductions has been recorded on the bill.




24 Training Module on Audit of Railways, Session 3

Slide 25

**Audit of TA Bill**

- Audit should see that
  - Travel by air, if any, is covered by the rules;
  - Whether officers who countersign their own bills do not abuse this privilege;
  - The possibility of reducing the no. of Group D staff accompanying an officer on tour;
  - The desirability of granting a fixed conveyance allowance where the charges for conveyances are heavy;
  - Whether arrangements exist to deface travelling allowance journals accompanying travelling allowance bills in a proper manner to prevent them from being passed a second time for payment.




25 Training Module on Audit of Railways: Session 3

Slide 26

**Audit of Provident Fund Accounts**

- Audit should see-
  - Contribution credited to the account in the previous half-year is correct;
  - Closing of the account and the calculations of interest for the previous year have been correctly done;
  - Recoveries on account of advances are being regularly made;
  - In case of new accounts, the concerned employee is eligible to subscribe to the fund.




26 Training Module on Audit of Railways: Session 3

Slide 27

**Audit of Provident Fund Accounts**

contd.

- Temporary withdrawals are for the specified purposes and sanctioned by the competent authority;
- (If under the computerised system) PF ledgers are printed only at the end of the year instead of monthly as under the manual system
- Final withdrawals are recorded in Ledger accounts and other relevant registers.



27 Training Module on Audit of Railways: Session 3

# **Session: 4**

## **Audit of Railway Accounts**

<b>Session Title: Audit of Railway Accounts..</b>		Session Guide
<b>Instructor's Guide</b>	Reference	Participants' Response
<b>Session Overview</b>		
<b>Welcome</b> participants to the session and remind them that their active participation is critical for the success of each session.	Lecture	
<b>Learning Objective</b>		
<b>Inform:</b> Given the inputs of accounting structures of the Indian Railways through group discussion, lecture and PowerPoint slide show, the participants will, at the end of the session, acquire an understanding of the basic concepts of the accounting system of the Indian Railways which will help them to focus on audit issues in the work context.	Lecture	
<b>Basic Concepts</b>		
<b>Discuss:</b> <ul style="list-style-type: none"> <li>● Railway Accounting Structure, Budget, the Railway Budget Process.</li> <li>● Appropriation Accounts, Form, Processes and the points to be seen while undertaking scrutiny of the Accounts.</li> <li>● Audit Certificates.</li> <li>● Types of possible Mis-classification with illustrations.</li> </ul>	Lecture with Power Point Slide Show <b>Session 4 AUDIT OF RAILWAY ACCOUNTS</b>	
<b>Summarise:</b>		
<b>Distribute</b> Participants' Note. <b>Tell</b> the participants that during the session, we discussed Accounting Structure, Budget, the Railway Budget Process, Appropriation Accounts and Audit Certificates. <b>Invite</b> questions on themes discussed. If participants have any doubts/clarifications about themes, clarify the same. Answer participants' queries. <b>Thank</b> the participants and bring the session to a close.	Session 4 Participants' Note	

**Training Method:** Interactive Lecture and Power Point Slide Show.

**Materials Required:** Power Point Slides, Projector, White Board, Marker Pen and Participants' Note.

## Session Title: Railway Accounting Structure

### Session Overview:

The Railways in India are as much a Government concern as a commercial enterprise. Most of the capital invested on the Indian Railways has been provided by the Government of India either by loans raised by it or from its own other resources. The Railways are also a commercial concern as they are engaged in manufacturing and in sale of transportation services thus earning profits, maintaining its own assets and paying interest (i.e. dividend) to the General Revenues.

The Government Accounts are kept purely on cash basis while the accounts of the Railways are kept on liability or accrued basis.

The accounts which are prepared in accordance with the requirements of commercial accounting in Railways are commonly known as "Capital and Revenue Accounts" and the accounts of the Railways maintained in accordance with the requirements of Government accounts are collectively termed as "Finance Accounts".

The accounts are maintained separately for revenue and capital purposes and are divided into three parts. They are

- Consolidated Fund of India,
- Contingency Fund of India,
- Public Accounts.

The Constitution of India vide Article 114(3) lays down that Parliament is now the supreme authority and no money can be spent without the authority of the Parliament.

### Budget

• Budget may be defined as a forecast of annual receipts and expenditure of the Central Government. The proposed expenditure included in the budget is of two kinds viz "Voted" and "Charged" components.

### Voted Expenditure

• Voted expenditure means items for which the provision of funds is subject to the vote of the parliament.

### Charged Expenditure

• Charged expenditure means items of expenditure which are sanctioned by the President and are not subjected to vote.

• For the preparation of budget by the Railway Board, the authorities who are empowered to incur the expenditure are required to submit to the Railway Board their Revised estimates for the current year and Budget estimates for the ensuing year.

• The estimates are prepared for each demand, by taking into consideration the expenditure of previous year and comparing with the current expenditure for seven months of the year. The Revised estimates and Budget estimates are normally submitted to Railway Board during November/December of each year.

• These estimates or demands for grants are recommended by the President and voted by the Parliament. These are then called "Grants" available for expenditure. The above resolutions when voted and passed by the Parliament is in the form of a Bill that is called "Appropriation Bill". Appropriation Bill when passed enables the authority to withdraw the money. If during the course of the year, usually at the fag end of the year, some extra provision is required, the projections are made through Final Modification. The Final Modification usually comes as the final grant. However, even if the amount sought for is found to be insufficient or excess as the case may, then the excess or savings for the grant is sought through a Modification.

### Flow of Accounts

• The grants as voted by the Parliament and the appropriations for the Charged expenditure as sanctioned by the President are distributed by the Railway Board. The sums distributed are called "Allotments" and orders by means of which the allotments are made are called "Budget Orders".

• The Budget Orders are accompanied by the final issues of "Demands for Grants" and works, machinery and rolling stock programme. The detailed distribution of the Budget Allotment to the Railway Administration contains allotment

for Working Expenses, Capital, and Capital Fund, Depreciation Reserve Fund, Development Fund and Open Line Works Revenue.

- The classification of an expenditure is on the basis of the nature of expenditure and the Department to which it pertains. The various demands for grants are enumerated in the Annexure.
- The classification under each Demand or Grant is divided into three parts namely:
  - Minor Head
  - Sub-Head
  - Detailed Head
- The classification is in the form of 7 digits for Revenue and 8 digits for Capital Expenditure.

Revenue	Capital
04-121-01	20-1131-03
04 - Demand No 4	20 –Capital
121 -Detailed head	1131 -Detailed head
01 -Primary unit	03 -Primary unit

- The Minor-Head/Sub-Head represents the major functional activities. The Detailed Head represents a further break-up of the activity classification i.e. identifying the expenditure in greater detail. The Minor-Head/Sub-Head/Detailed-Head represents the activity of which the expenditure is being incurred. The primary unit represents the object of expenditure i.e. salary, honorarium, allowances etc.

### The Railway Budget Process

- Para 301 of the Indian Railway Financial code Vol.I states that the Budget is a Constitutional and Management document.
- Article 112(1), of the Constitution of India, prescribes 'The President shall in respect of every financial year cause to be laid before both Houses of Parliament, a Statement of the estimated Receipts and Expenditure of the Government of India for that year' referred to as the "Annual Financial Statement" and popularly called the "Annual Budget".
- Every budget contains three elements-

- A review of the preceding year, including the actual Receipts and Expenditure in that year;
- An estimate of the Receipts and Expenditure of the following year; and
- Proposals, if any, for meeting the requirements of the following year.
- The following is the annual process
  - The Annual Budget
  - Budget Allotment
  - August Review and Revised Estimates
  - Supplementary Grants
  - Final Modifications
  - Final Grant

### The Annual Budget

- The requirements of funds under the several Sub-Heads of demands for grants in respect of the various departments will be advised by the Budget Officer of the Division and by the Departmental Officers. In the case of other Branch Offices, the advice will be sent to the respective Heads of the Departments and the Local Accounts Officer.
- The Accounts Officer will vet these estimates and forward his remarks, if any, to the Heads of the Departments concerned and endorse a copy to the Financial Adviser and Chief Accounts Officer (Budget) along with a copy of the estimates vetted by him.
- The Heads of the Departments will consolidate the requirements of their departments under each of the Sub-Heads of demands, etc., for the Railway as a whole and forward to the Budget Section of the Financial Adviser and Chief Accounts Officer's Office.
- These will be scrutinised by the Financial Adviser and Chief Accounts Officer and modifications, if any, necessary, will be discussed with the Heads of the Departments and the final requirements advised to the Railway Board in the prescribed form.
- For this purpose, the various sub-Detailed heads of account which fall under the several sub-heads of the Demands For Grants are available in the Printed forms sent by the Railway Board to all the Railways, in which the Revised Estimates for the current year and the Budget Estimates for the ensuing year have to be furnished.
- The detailed procedures for the preparation of budgets by the Railway Administration are



contained in paragraphs 309 to 353 of the Indian Railway Financial Code Volume I.

### Budget Allotment

- The Budget Allotments for the Railway under the various Sub-Heads of the several grants, as approved by the Parliament will be found in the Book of Demands for Grants in the case of Railway Grants and in the Budget Orders in the case of Civil Grants viz 'P' Loans and Advances by the Central Government and Interest on Debt and other obligations and reduction or avoidance of debt.
- As regards expenditure on Works, Machinery and Rolling Stock, the details of the Works etc., approved and the provision of funds made thereof will be found in the Final Works, Machinery and Rolling Stock Programme of the Individual Railway as well as in the similar publications pertaining to all the Railways forwarded by the Railway Board.
- In the two publications mentioned above, only the particulars of Works and Machinery (except track renewal works) the cost of which amount to Rupees Five lakhs each or more are listed out individually.
- The list of Works and Machinery costing over Rs.50, 000/- each but less than Rs. 5, 00,000/-, will be issued separately by the Railway Board in the form of a booklet.
- In respect of works and machinery costing less than Rs.50, 000/- each, only a lump sum provision will be indicated therein.
- As regards the 'Track Renewal Works', the list of works costing Rs.50,000 each or more which have been approved will be forwarded to the Railway Administrations and to this Office by the Railway Board separately.
- At the beginning of each financial year, the following Budget documents will be received from the Railway Board and they will be distributed by the Headquarters Books and Budget Section to the Sections/Divisions suitably taking into account and actual number of copies of the publications sent by the Railway Board.
  - Budget Speech, by the Hon'ble Minister for Railways.
  - Budget Statement.
  - White Paper (containing the explanatory memorandum on the Railway (Budget).
  - Book of Demands.

- Works, Machinery and Rolling Stock Programme of the concerned Railway.
- Works, Machinery and Rolling Stock Programme of the Railway Board.
- Works, Machinery and Rolling Stock Programme of the Railways-Part - I and II.
- List of Approved Works, costing over Rs.50, 000/- each and upto 5 lakhs each - Each Railway.
- One set of these documents will be got bound and kept with the Headquarters Books and Budget Section for reference.
- A perusal of the documents mentioned above will bring to notice the salient features of the Budget of the year and information, which may be relevant to the incurrence of expenditure on the Railways.
- **The distribution of the Budget Grant :** After the receipt of the budget documents and budget orders, Statements showing the distribution of funds to the several Heads of Department/ Divisional Railway Managers/ Heads of Offices, under the various Sub-Heads/ primary units in respect of each of the grants will be prepared by the Budget section of the Financial Adviser and Chief Accounts Officer's Office, duly taking into account:
  - The requirements of funds advised by the Head of the Department/ Divisional Railway Managers/ Head of the Offices at the time of compilation of the budget estimates and
  - The changes, if any, made by the Railway Board in the Estimates and submitted by the Administration. Copies of these statements approved by the General Manager will be endorsed to Audit also. The Headquarters Books section will check these statements to see that the total amounts distributed to the various Heads of Departments/ Divisional Railway Managers/ Heads of Offices under each of the Sub-Heads/ primary units does not exceed the amount advised in the book of Demands for Grants. The posting of the distribution in the Budget register maintained by the Accounts department will also be simultaneously verified.

## August Review and Revised Estimates

- A review of the requirements of funds of the Railway under the various grants will be submitted to the Railway Board on the dates prescribed. This is mainly intended for the Railway Board to enable them to obtain a supplementary grant duly voted by the Legislature, after taking into account the position on all the Railways.
- The revised estimates for each year will be submitted by the Railway Administration along with the Budget Estimates in the ensuing year. Based on the requirements advised through the Revised Estimates and further clarifications obtained from the Railway Administrations as a result of scrutiny of the estimates by the Railway Board, the Railway Board will advise the Railways on the amount fixed by them as the Revised Estimate under each of the grants. While in the Book of Demands, the amount fixed under each of the Sub-Heads of grant is prescribed in the advice regarding the Revised Estimates, the amount for the grant as a whole and for the particular Sub-Heads from and to which re-appropriation is not within the powers of the Administration, are laid down. Based on the amounts so advised, the distribution of funds to the various Heads of the Departments is made by the Accounts Office in the same manner as the distribution of Original Grant. A copy of this distribution statement is also received in this office and will be scrutinised generally on the same lines as the distribution statements of Original Grant.

## Supplementary Grants

- Based on the August Reviews and/or Revised Estimates of the individual Railways, the Railway Board presents a Supplementary demand to the Parliament for their vote. After the same is voted by the Parliament, copies of the Book of Supplementary demands will be forwarded to the Railway Administrations and to this Office. The amount allocated to the Individual Railways in respect of each grant out of the supplementary grants voted by the Parliament will also be advised separately by the Railway Board to the Railway Administrations and to this Office. The funds so allotted to the Railway will be distributed in the same manner as the Original Grant. The checks exercised on the

distribution statements of the Original Grant will apply mutatis mutandis to the above distribution statements also.

## Final Modifications

- The Railway Administration will furnish to the Railway Board for each grant separately, so as to reach the latter not later than the 21st February of each year, statements showing the additional allotments required (both Voted and Charged) or surrenders to be made, during the current financial year under each head of re-appropriation, as prescribed in the Budget Orders. Further to the submission of the final statements as above, the budgetary position will be further reviewed by the Administration and any changes considered necessary as a result of new factors visualised and the concomitant requirements, advised to the Railway Board telegraphically so as to reach the Board on the 1st March of each year or any other date in March that may be advised by the Railway Board. Any violent fluctuations in the Final Modifications as advised above will also be advised by the Railway Administration to the Railway Board telegraphically.

## Civil Grants

- As regards the Civil Grants viz., 'Interest on Debt and Other Obligations and Reduction or Avoidance of Debt' and 'Loans and Advances Bearing Interest', the figures of additional allotments required or surrenders to be made will be advised to the Railway Board by the Administration so as to reach the former by the 15th February of each year. This will be treated as final and no change can be made in the allotment of these grants.

## Final Grant

- Based on the above advises, the Railway Board will advise the Railway Administration before the close of the financial year the amount fixed as Final Grant in respect of the several Demands for Grants. In such advises, the total amount for each grant and the amounts fixed in respect of some of the Sub-Heads of the grant from and to which re-appropriation of funds is not within the competence of the Railway Administration, only will be advised. The funds so allotted will be distributed to the various authorities in the same manner as the Original Grant. The checks exercised on the statements showing the distribution of the Original Grant

will apply mutatis mutandis to the above statements. In addition, it should be seen that the distribution of the Final Grant is made before the close of the financial year.

### **Appropriation Accounts**

#### **The Form of Appropriation Accounts**

- **Appropriation Accounts**— The Railway Budget is an instrument of Parliamentary Financial control. This control is secured not only by the fact that all "Voted" expenditure must receive Parliament's prior approval, but also the actual expenditure incurred against the grants voted by the Parliament and Appropriation sanctioned by the President should be reported back to it, through the Public Accounts Committee.
- The Accounts Department, subjects the expenditure incurred on the Railways to internal check. At the end of the year i.e. after the March Account Current is finalised, the Accounts Department prepares statement of actual expenditure against the allotments and after obtaining the remarks of the spending authorities for variations, consolidate the same by different Grants. These statements are called **Appropriation Accounts** and are prepared and sent to Railway Board/ Pr. Director of Audit. The Pr. Director of Audit after scrutinising the Accounts certifies the accounts with his remarks and is presented to the Parliament. Then the Public Accounts Committee examines the same on behalf of the Parliament.
- The Appropriation Accounts should be prepared separately for each grant. Comparison is made between the Original Grant/Appropriations and Final Grant and between the Final Grant and actual expenditure as booked in the accounts of the Railway. These are otherwise known as Column I and Column IV statements.
- They are the statements which are prepared for presentation to the Public Accounts Committee, comparing the amount of actual expenditure with the amount of grants voted by Parliament and Appropriation sanctioned by the President. These statements are signed both by the Chairman Railway Board, as a Principal Secretary to the Government of India, Ministry of Railways and by the Financial Commissioner, Railways, as Secretary to the Government of

India, Ministry of Railways in financial matters, and transmitted to the Director of Railway Audit who has been entrusted by the Comptroller And Auditor General of India with the duty of reporting these Accounts.

#### **The Form of Appropriation Accounts:**

- The form of Appropriation Accounts has been fixed by the Public Accounts Committee in such a way that they would exhibit the variations from the amounts sanctioned by the Parliament in the form of Budget and Appropriations. This has to be adopted on a uniform basis both on the Civil side and on the Railway side as the Railway Budget is a part of the Central Government Budget. To understand this better we would go into the structure available on the Civil side to see the significance of the form.
- The Original Grant and the Supplementary Grant are both sanctioned by the Parliament. The Railway Board has been authorised to re-appropriate within the Grant to the extent of the Grant as voted by the Parliament by transferring the provisions from one Subhead to another by a formal order of re-appropriation. However, re-appropriation from one grant to another is not permissible.
- Budget is sanctioned by the Parliament Sub-Head wise for the individual Railway. To understand this better, we shall go back to the time when the revised Accounting classification was introduced. The revised Accounting classification was based on the functional classification. We shall compare this with the Railways structure of Accounts and tabulate:

<b>FUNCTIONAL CLASSIFICATION</b>	<b>RAILWAY SIDE</b>
Function	Major Head
Programme	Minor Head
Schemes	Sub-Head
Activities	Detailed Head
Object of each activity	Primary unit

- From the above we see that Parliament will sanction grants at the level of schemes and would require that the Accounts are also rendered at the level of schemes to be more meaningful. Similar classification on the Railway side is the Sub-head of a grant, which is how the

Parliament sanctions in the Budget order. The Parliament sanctions the grant Sub-head wise, and permits the Railway Board to re-appropriate the funds within the grant to the extent of Sub-Head wise savings in the grant. This means that a saving under a scheme could be transferred to another scheme under the same functional head/programme head. So naturally, the Parliament would like to know the extent to which, the amounts have been so re-appropriated

- This is what is called the Col I variation which is the difference between the Original grant plus Appropriation and the Final Grant or Appropriation in terms of para 409 of the Indian Railway Financial Code Vol I. In other words it is the explanation for the residual modification sanctioned by the competent authority other than the Parliament.
- Then comes the Col. IV variation, which is the variation between the actuals and the Final Grant. It is this statement with the explanation for variations, which is called the Statement of Appropriation Accounts.
- Appropriation Accounts are being prepared for each grant. The various grants and what functional group they represent are given in the Annexure.
- The Appropriation Accounts of the individual grants should be compiled in form F-403. It should be noted that while the figures in the various Railway Grants (both Revenue and Works) are to be exhibited in thousands of rupees, the figures in the Civil Grants are to be shown in units of rupees. So far as the Appropriation Accounts of the Sub-Head 'Audit' under Grant No.2 is concerned, the figures should be shown in hundred of rupees.

### **Points to be seen while checking Appropriation Accounts**

#### **The process of scrutiny of the accounts**

- Exhibition Of Actual Expenditure In The Appropriation Accounts. [D:\STMs\\_current\\_details\PEER\\_REVIEWED\\_AND\\_UPDATED\\_STMS\Ra6.htm](D:\STMs_current_details\PEER_REVIEWED_AND_UPDATED_STMS\Ra6.htm) - [Ra 6 1](#) Verification of the figures exhibited in the Appropriation Accounts
- Civil Grant: Loans and Advances by the Central Government

- [D:\STMs\\_current\\_details\PEER\\_REVIEWED\\_AND\\_UPDATED\\_STMS\Ra6.htm](D:\STMs_current_details\PEER_REVIEWED_AND_UPDATED_STMS\Ra6.htm) - [Ra 6 3](#) Explanations in the Accounts

## Points for inclusion in Annexure 'J' or the Statements of Defects in Budgeting (Source: Para 393 to 422 of RAM)

### Framing of Audit Comments

- **Appropriation Audit**—the Books and Budget Section of the Headquarters office carry out the Audit of the Appropriation Accounts of the Railway, with the assistance of the Division, Branches and Sections. It is on these audit units, however, that the responsibility for the detailed audit and scrutiny of the portions of the accounts, statements etc., pertaining to their units rests.
- The orders issued by the Railway Board, and the Comptroller and Auditor General of India in regard to the compilation and audit of these accounts as well as the instructions issued by the Administration to the various Divisional/Branch Offices will be received in the Headquarters Books and Budget Section, which will furnish copies to the Sections/Divisions with suitable instructions, where necessary, for information and guidance.
- A separate file for collecting the orders/instructions, etc. connected with the compilation and audit scrutiny, etc. of the Appropriation Accounts should be kept in each of the Divisions/Sections and also a register for recording the points, as and when they come to notice, during the course of normal audit, and having a bearing on the Appropriation Accounts, Annexures, etc. so that they may not be lost sight of, at the time of the scrutiny of the accounts, etc.
- For the Purpose of the submission of the Appropriation Accounts of the Railways in India, and the Audit Report, to the Lok Sabha/Rajya Sabha promptly by the date fixed for the purpose, a detailed time table for the submission of the various accounts, Annexures and Statements by the individual Railway Administrations to the Railway Board and to the Comptroller and Auditor General of India by the Directors of Audit, will be drawn up each year by the Railway Board in consultation with the Comptroller and Auditor General of India. Copies of the same will be forwarded to all the Railway Administrations by the Railway Board in June/July of the year following the financial year to which the accounts relate.

- Based on that time table, the Financial Adviser and Chief Accounts Officer will draw up a detailed programme laying down the dates by which the various Divisional/Branch Offices (Executive) should furnish the accounts/returns relating to them to their Accounts Officer.
- The time table will also indicate the dates by which the Accounts Officer should vet the same and forward them to the Head of the Department, Financial Adviser and Chief Accounts Officer (Budget) and Local Audit Officers. The dates by which the Heads of the Departments should furnish the accounts of the relevant Subheads of the several grants to the Financial Adviser and Chief Accounts Officer for the Railway as a whole will also be laid down.
- In so far as the amounts allotted to the Headquarters Offices are concerned, the position of the Head of the Department who is the Controlling Officer for such amounts, will correspond to that of the Branch/Divisional Executive Officers in regard to the submission of the Appropriation Accounts for this portion of the allotment to the concerned internal checking section of the Financial Adviser and Chief Accounts Officer's Office for purposes of scrutiny.
- The Headquarters Books and Budget Section will forward copies of these programmes to all the Divisional/Branch Audit Offices.
- Based on the Accounts, prepared by the Heads of the Departments from the ones furnished by the several Executive Offices in the Divisions/Branches, the advance copies of the Accounts will be compiled by the Budget Section of the Financial Adviser and Chief Accounts Officer's Office and forwarded to the Railway Board and two copies thereof furnished to this office.
- The advance copies will be scrutinised expeditiously and the points, if any which could not be got finalised informally, will be forwarded to the Financial Adviser and Chief Accounts Officer taking into account the points raised by the Branch/Divisional Audit Offices.
- The points so raised will be discussed with the Assistant Financial Adviser (Budget) and settled.
- In the case of a difference of opinion between the Audit and Accounts Officers while

discussing the points, such points will be arranged for discussion at higher levels.

- After settling the points, the draft of the final copy of the Accounts will be prepared by the Accounts Office, duly taking into account the results of discussions and sent to this office for concurrence.
- After the issue of the proposed final copy is agreed to by this Office, the final copy will be got signed by the General Manager and sent to the Railway Board duly endorsing two copies to this office.
- In case, this office agrees to the issue of the final copy with certain reservations/qualifications, the Railway Board will be appraised of the fact enclosing a copy of our letter, wherever necessary, while forwarding the final copy. One of the copies will be forwarded to the Deputy Comptroller and Auditor General (Railways) along with our remarks, if any.

There may be a few cases, where there is disagreement between the Audit and Accounts even at the level of the Director. In such cases, a verbatim copy of the observations of Audit and the remarks of the Administration thereon will be forwarded by the Railway Administration to the Railway Board while forwarding the final copy. The Comptroller and Auditor General of India will also be apprised of the fact while forwarding the final copy.

### **Points that have to be seen while checking the Appropriation Accounts.**

The basic idea behind the check of Appropriation Accounts is to see-

- Whether the accounts have been rendered properly
- The expenditure shown in the accounts were legally available for and applicable for the service to which they have been applied or charged.
- The expenditure conforms to the authority which governs it.
- Every re-appropriation has been made in accordance with the provision under the Rules.

- Types of objections from an Audit point of view that could come up during the check of Appropriation accounts are:

- Misclassification between one Grant and another.
- Double booking.
- Mistakes in Accounting.
- Financial Transfer without physical transfers of materials and vice versa.

- To scrutinise this the following will be useful:

- The various budget orders should be linked to the Appropriation Accounts of the various grants to see that the Budget Allotments and the Supplementary Grants have been indicated correctly.

- The actual expenditure exhibited in the Appropriation Accounts should be checked with reference to the figures in the Account Current and the details of grant-wise actuals.

- It should be ensured that the Appropriation Accounts for the revenue grants are being rendered Sub-Head wise.

- It should be ensured that in cases where there was no Budget Allotment or Supplementary Grant against a particular head, no expenditure is incurred and also that there is no residual modification as this is not permissible. In other words, residual modification is possible where there was either a budget allotment or a supplementary grant

- Supplementary grants are being proposed and sanctioned for a grant as a whole instead of Sub-head wise as in the case of Budget grant. However, as Supplementary grants are sanctioned based on the proposals submitted by the individual Railways, it should be reviewed to see that the distribution of Supplementary grants are done as per the proposals submitted by the Railway for its sanction.

- It should be ensured that the limits of variation specified in the codes are not applied by the individual Railways and that the explanations are invariably given for all variations irrespective of the amount involved.

- The explanations for variations should be verifiable in Audit.

- All cases of defects in budgeting should be thoroughly scrutinised to prove that at

every stage of the budgetary exercise proper control was not exercised.

- Cases where there have been mis-classifications should be brought to the notice of the Railway Administration. There may be mis-classifications between Revenue Grants, or between Revenue Grants and Works Grants or between any of the above two and Earnings.

- The Appropriation Accounts in respect of Works Grants should be rendered work-wise as the budget allotment is made work-wise only as appearing in the Rolling Stock Works and Machinery programme.

- It should be ensured that the works included in the Pink Book have been classified correctly depending on the nature of the work and the correct source of funding.

- With the introduction of Capital Fund, Capital Expenditure could be met from either Capital (Provided by the Central Government) or Capital Fund (Provided by borrowings). Railway Board has clearly laid down which are the Plan Heads which have to be booked under Capital and which are the Plan Heads which have to be met from Capital fund. There are no Plan Heads, which can be booked against both the above sources.

- It should also be ensured that for works where there is no Budget Allotment or Supplementary Grant, no residual modification is done.

- It should also be ensured that no expenditure can be incurred on a work for which there is no Budget Allotment.

- It should also be ensured that credits on Capital account are booked to Capital and not to Revenue when it exceeds the limits prescribed.

### **Exhibition of actual expenditure in the Appropriation Accounts:**

- As soon as the accounts for the year are closed, the various Branch/Divisional Accounts Officers are required to furnish to the Financial Adviser and Chief Accounts Officer (Budget), the Heads of the Departments and the local audit officers the figures of actual expenditure in units of rupees, under each of the grants by the several Sub-Heads of the grant by each

Department in the proforma laid down by the Financial Adviser and Chief Accounts Officer.

- On receipt of these statements, the same should be checked by the local audit officers with reference to the Revenue Allocation Registers, Works Registers, etc. and with reference to the schedules accompanying the Accounts Current for March of the year.

- The local audit officers shall transmit these to the Headquarters Books and Budget section, duly audited, as expeditiously as possible. They should forward one copy of each of the statements.

- These statements will form the basis for the exhibition of the actual expenditure in the relevant Appropriation Accounts of the several departments of the Divisions.

- In so far as the allotments made to the Headquarters are concerned, the Expenditure (Central) Section of the Accounts Office will furnish the figures of actual expenditure.

- The Expenditure Audit Section will audit this in Headquarters and later will furnish a copy of the statement to the Headquarters Books and Budget Section.

- Apart from the above, the Divisional/Branch Accounts Officers also forward to the Departments, Heads of Departments, Financial Adviser and Chief Accounts Officer (Budget) and the local audit officers the figures of the actual expenditure in respect of each of the works costing more than Rs.50,000 each and the total expenditure in respect of works costing not more than Rs.50,000 each in respect of the works Grants.

- Audited copies of these statements will also be forwarded to the Headquarters Books and Budget Section. These statements will be made use of at the time of scrutiny of the explanations for variations shown in column 4 of the Appropriation Accounts.

- The details so received from the Divisions/Branches will be consolidated in the Headquarters Books and Budget Section and the expenditure under each Sub-Head of each of the grants arrived at.

- Similarly, the figures of actual credits or recoveries realised during the year in respect of each of the demands for grants under each of the items specified in the list of credits or recoveries excluded from the scope of the

demands will be furnished by the various Accounts Officers to the Financial Adviser and Chief Accounts Officer (Budget) and local audit officers.

- These should also be verified expeditiously and audited copies forwarded to the Headquarters Books and Budget Section. From the above details a consolidated statement showing the total for each item in respect of each of the grants will be arrived at.

### **Verification of the figures exhibited in the Appropriation Accounts:**

- The figures of the Budget Grant shown in the consolidated copy of the Accounts will be verified with the figures shown against the Railway in the Book of demands for Grants, as voted by the Parliament, in respect of 'voted' expenditure and sanctioned by the President in the case of 'Charged' expenditure.
- The figures of charged expenditure will also be indicated as such under the relevant grants in the book of demands also.
- In the case of Civil Grants, which will not figure in the book of demands, the figures will be verified with the relevant Budget Orders received from the Railway Board.
- The figures of Supplementary Grant and Final Grant should be verified with the advices received from the Railway Board communicating the above.
- As regards the verification of the figures of Supplementary and Final Grants in respect of each of the Sub-heads, the same will be checked with reference to the distribution of the Supplementary and Final Grant over the Sub-heads of the grants sanctioned by the General Manager before the close of the year.
- The figures of actual expenditure for the grant as a whole will have to be verified with reference to the amounts shown in the relevant schedules accompanying the Accounts Current for March.
- The Budget Estimate figures under 'credits' will similarly be checked with the figures shown in the Book of Demands.
- The Revised Estimate figures under credits will be verified with reference to the advices received from the Railway Board fixing the Revised Estimates for each of the grants, which will be available in the files of the Budget Section of the Accounts Office and with reference to the

distribution of the Revised Estimates approved by the General Manager, as described earlier.

- The actual will be verified with the consolidated statement referred to earlier and with reference to the schedules to the Accounts Current for March.

### **Civil Grant: Loans and Advances by the Central Government**

- The actual expenditure will be compared with the totals of the expenditure relating to the various units as well as with the figures shown in the Account Current for March.
- In respect of the Civil Grant-Interest on debt and other obligations, the figures of actual expenditure will be compared with the totals of the expenditure relating to the various units as shown in their accounts as well as with the figures advised to the Railway Board, while passing on the debits for March, wherein the figures for the whole year is also indicated, to the Railway Board.
- In so far as the Appropriation Accounts of the various Departments in each of the units are concerned, the figures of Budget Grant, Final Grant etc., will be verified with reference to the Division wise distribution of the Budget and Final Grant communicated by the various Heads of Departments.
- The figures of actual expenditure will be verified with reference to the Department-wise and Sub-head-wise actuals already audited by them.

### **Explanations in the Accounts:**

- It should be seen that the explanations for variations between the Original Grant and Final Grant (Column 1) and between the Final Grant and Actual Expenditure (Column 4) are lucid, self-explanatory, illuminating and in unambiguous terms. The following points should also be borne in mind:-
  - In all cases, definite reasons for the excess or saving should be given, bringing out clearly why the particular event leading to the variation could not be foreseen at the time of the preparation of the Budget and the Revised Estimates; and what circumstances arose subsequently leading to the variation.
  - In the case of an excess, it should be mentioned as to why the incurrence of the liability could not be postponed; and if for



any reason (to be specified), it could not be postponed, these explanation would bring out why necessary provisions could not be made in the Final Estimates.

- The explanations also should elucidate-
  - In case of surrenders/lapses on account of non-receipt of bills or debits for Stores (i) the sources of supply and (ii) whether the suppliers were consulted in the matter, and, if so, at what stages, and
  - In case of increases/excesses on account of receipt of more debits or payments for Stores (i) when those debits etc. were received and (ii) at what stages of the estimates the suppliers were consulted.
- Variations arising out of changes in procedure, allocation, further consideration of schemes, plans, etc. during the course of the year, should be reflected in the explanations relating to all the concerned Sub-Heads of the grant or grants.
- In the case of variations arising out of defects in estimating, it should be clearly brought out at what stage the liability of the expenditure arose, how the errors of omission or commission occur, why they could not be set right before the close of the year, whether the question of individual responsibility has been considered and if so, with what results and what steps have been taken to avoid a recurrence of such errors.
- In the case of variations caused by misclassifications and other mistakes in accounting, the explanations should bring out when the errors occurred and why they could not be detected in the course of review of expenditure during the year and set right before the final closing of the year's accounts.
- Whenever, reference to some letters of the Railway Board is quoted in support of the explanations, copy of the same should invariably be appended.
- In the case of points referred to in items (ii), (iii) and (iv) above, it should be ensured that the fact that the items will be included in the relevant Annexure/Statements is mentioned in the explanations themselves.
- It should be noted that the explanations for variations in Column 1 are required to be furnished for the grant as a whole and not by

each Sub-Head. Further in regard to Column 1, the explanations are required to be furnished only when the variation for the grant as a whole is in excess of the permissible limits or when the variation in respect of any of the Sub-heads is in excess of the permissible limits. Variations involving amounts of less than Rupees One lakh each may be omitted and grouped under minor variations. This limit does not, however, apply in the case of defects in estimating etc. which may be brought out in the explanations according to the limits laid down for the purpose. It may be added here that if the variation in column 1 for the grant as a whole is within the prescribed limits, but the variation in column 1 under some of the Sub-heads exceed the limit, the explanations for the grant as a whole should be based upon and confined as far as possible, to the compensating variations under those particular Sub-heads.

- The explanations for Column 1 should be correlated with those furnished by the Administration at the time of Revised Estimates, Final Modification and latest Modifications.
- In so far as the Divisional Appropriation Accounts are concerned, the explanations will continue to be furnished by Sub-heads of the Grant both in respect of column 1 and column 4.
- Further the limits below which explanations are not required to be furnished, laid down in the Indian Railway Financial Code, is applicable for the Sub-head of the grant as a whole and is not intended to apply to each individual Department, District or Divisional Units.
- The explanations furnished in the audited copies of the Accounts received from the various units will be consolidated in the Headquarters Books and Budget Section to verify the explanations furnished in the consolidated accounts received from the Financial Adviser and Chief Accounts Officer.

### **The Process of Scrutiny Of The Accounts**

Exhibition Of Actual Expenditure In The Appropriation Accounts:

- As soon as the accounts for the year are closed, the various Branch/Divisional Accounts Officers are required to furnish to the Financial Adviser and Chief Accounts Officer (Budget), the Heads of the Departments and the local audit

officers the figures of actual expenditure in units of rupees, under each of the grants by the several Sub-Heads of the grant by each Department in the proforma laid down by the Financial Adviser and Chief Accounts Officer.

- On receipt of these statements, the same should be checked by the local audit officers with reference to the Revenue Allocation Registers, Works Registers, etc. and with reference to the schedules accompanying the Accounts Current for March of the year.
- The local audit officers to the Headquarters Books and Budget section, duly audited, as expeditiously as possible should forward one copy of each of the statements.
- These statements will form the basis for the exhibition of the actual expenditure in the relevant Appropriation Accounts of the several departments of the Divisions.
- In so far as the allotments made to the Headquarters are concerned, the Expenditure (Central) Section of the Accounts Office will furnish the figures of actual expenditure.
- The Expenditure Audit Section will audit this in Headquarters and later will furnish a copy of the statement to the Headquarters Books and Budget Section.
- Apart from the above, the Divisional/Branch Accounts Officers also forward to the Departments, Heads of Departments, Financial Adviser and Chief Accounts Officer (Budget) and the local audit officers the figures of the actual expenditure in respect of each of the works costing more than Rs.50,000 each and the total expenditure in respect of works costing not more than Rs.50,000 each in respect of the works Grants.
- Audited copies of these statements will also be forwarded to the Headquarters Books and Budget Section. These statements will be made use of at the time of scrutiny of the explanations for variations shown in column 4 of the Appropriation Accounts.
- The details so received from the Divisions/Branches will be consolidated in the Headquarters Books and Budget Section and the expenditure under each Sub-head of each of the grants arrived at.
- Similarly, the figures of actual credits or recoveries realised during the year in respect of each of the demands for grants under each of

the items specified in the list of credits or recoveries excluded from the scope of the demands will be furnished by the various Accounts Officers to the Financial Adviser and Chief Accounts Officer (Budget) and local audit officers.

- These should also be verified expeditiously and audited copies forwarded to the Headquarters Books and Budget Section. From the above details a consolidated statement showing the total for each item in respect of each of the grants will be arrived at.

### **Points for inclusion in Annexure 'J' or the Statement of Defects in Budgeting**

- After the scrutiny of the accounts as described earlier, the points, if any, which require further clarification/elucidation or cases, which require inclusion in Annexure 'J' or the Statements of Defects in Budgeting should be drawn out and sent to the Financial Adviser and Chief Accounts Officer with the approval of the Branch Officer.
- In preparing the notes, the points raised by the Divisions will also be taken into account. If felt necessary the statement may be finalised after discussion between Audit and Accounts.
- The draft final copy should be approved by this Office before the final copy is prepared by the Administration and the signature of the General Manager obtained thereon.
- The final copy received from the Administration will be compared with the checked draft final copy and one copy forwarded to the Deputy Comptroller and Auditor General (Railways) after ensuring that the same has been signed by the General Manager personally.
- The facts regarding the reservations with which the Accounts have been certified will be brought to the specific notice of the Deputy Comptroller and Auditor General (Railways) to enable the matter being pursued with the Railway Board.
- If any delay in obtaining the General Manager's signature is anticipated, the Administration may send one unsigned copy to the Railway Board to avoid delay in the finalisation of the accounts in the Railway Board's Office.
- This office also will obtain one unsigned copy from the Financial Adviser and Chief Accounts

Officer and forward the same to the Deputy Comptroller and Auditor General (Railways).

- After the accounts are signed by the General Manager, copies will be forwarded to the Railway Board/ Comptroller and Auditor General of India by the Administration/this Office.

### **Contents of Annexure:-**

Annexure.1 Various Demands for Grants

Annexure.2 : Types of Misclassification Possible

Annexure A: Statement Of Unsanctioned Expenditure

Annexure B : Statement Of Undercharges Detected By Accounts And Audit

Annexure C : Statement Of Remission And Abandonment Of Claims To Revenue

Annexure D : Review Of Expenditure On Important Open Line Works And New Constructions

Annexure E : Statement Showing Revenue And Capital Expenditure Relating to Strategic Lines

Annexure F : Statement Of Estimate And Actual Credits Or Recoveries

Annexure G : Block Accounts including Capital Statement Comprising The Loan Accounts) Balance Sheet And Profit And Loss Account

Annexure H : Statement Of Losses

Annexure I Statement of Irregular Reappropriations

**Audit Certificates:** The various Audit Certificates to be signed by the Principal Directors of Audit which are as follows:

- Appropriation Accounts and Balance Sheet of the individual Railway.
- Capital and Revenue Accounts, Finance Accounts, Review of Balances and other Accounts of the individual Railways for the year ending with March Account.

- March Accounts of the individual Railway before their submission to the Railway Board (Accounts).

- Pilgrim Tax.

## CLASSIFICATION OF ACCOUNTS OF EXPENDITURE AND EARNINGS

The classification of expenditure and earnings embodied in this volume, as per Para 4 of the (preface to Financial Code, Volume I, is based on the recommendations of the Task Force constituted in 1973 (in pursuance of the recommendations of the Railway Convention Committee, 1971), as accepted by the Government in consultation with the Comptroller and Auditor General of India. This is in supersession of the Classification of Earnings, Classification of Revenue Expenditure and Classification of Capital Expenditure contained in Appendices I, II and III respectively

of the General Code Volume II. This revised classification is effective from 1st April 1979

## CLASSIFICATION OF REVENUE EXPENDITURE

The revenue working expenses of the Railways are classified under 13 sub-major heads with a separate Abstract for each Sub-major head, viz.-

The revenue working expenses of the Railways are classified under 13 sub-major heads with a separate Abstract for each Sub-major head, viz.-

Abstract	Particulars
Abstract 'A'-	General Superintendence and Services.
Abstract 'B'-	Repairs and Maintenance of Permanent Way and Works.
Abstract 'C'-	Repairs and Maintenance of Motive Power.
Abstract 'D'-	Repairs and Maintenance of Carriages and Wagons.
Abstract 'E'-	Repairs and Maintenance of Plant and Equipment.
Abstract 'F'-	Operating Expenses-Rolling Stock and Equipment.
Abstract 'G'-	Operating Expenses-Traffic
Abstract 'H'-	Operating Expenses-Fuel.
Abstract 'J'-	Staff Welfare and Amenities.
Abstract 'K'-	Miscellaneous Working Expenses.
Abstract 'L'-	Provident Fund, Pension and other retirement benefits.
Abstract 'M'-	Appropriation to Funds
Abstract 'N'-	Suspense.
Abstract " O"	Government Contribution for Defined Contribution Pension Scheme

The Sub-major heads are divided into minor, sub, and detailed heads as shown in the accompanying classification. The introduction or abolition or change of nomenclature of any minor or sub head, the transfer of a sub-head or detailed head from one minor head or sub head to another, and any rearrangement of

abstracts are not within the competence of a Railway Administration. But the Financial Adviser and Chief Accounts Officer of a Railway may with the approval of the General Manager introduce a new detailed head within a sub-head except when the necessity arises of a new class of expenditure, in which case the orders of the Railway Board should be obtained as to

the sub-head under which the detailed head should appear. When, however, a new detailed head is opened by Railway Administration, the Railway Board should be informed.

The structure of the accounts classification is such that it corresponds to and is in line with the revised classification of the Demands for Grants. While the alpha (i.e. the letter of the Abstract) corresponds to the Demand head, the minor, sub-head and detailed heads of accounts, represent classification of the activity from a broad grouping into its details. The classification lends itself to computerisation and its utility from the point

of view of analysis of costs will be greater when the compilation is taken on the computer in due course of time. On computerisation of the accounting system, the alpha of the abstract classification will be substituted by a Numerical Code as follows:-

A-03, B-04, C-05, D-06, E-07, F-08, G-09, H-10, J-11, K-12, L-13, M-14 & N-12

Which will be the same as for Demands for Grants. Under the manual system however it is preferable to retain the alpha character of the Abstract classification in view of its age long familiarity. In this connection, a summary of the Revised demand Structure-Demand for Grants for Expenditure on Railways is given below:-

### CLASSIFICATION OF REVENUE EXPENDITURE APP. I

Sr.No.	Group	No	Demand Name of demand
I.	Policy Formulation and Services Common to all Railways	1.	Railway Board
		2.	Miscellaneous Expenditure (General)
II.	General Superintendence and Services on Railways	3.	General Superintendence and Services on Railways.
III.	Repairs and Maintenance	4.	Repairs and Maintenance of Permanent Way and Works.
		5.	Repairs and Maintenance of Motive Power.
		6.	Repairs and Maintenance of Carriages and Wagons.
		7.	Repairs and Maintenance of plant and Equipment
IV.	Operation	8.	Operating Expenses-Rolling Stock and Equipment.
		9.	Operating Expenses-Traffic.
		10.	Operating Expenses-Fuel.
V.	Staff Welfare, Retirement Benefits and Miscellaneous	11.	Staff Welfare and Amenities.
		12.	Miscellaneous Working Expenses.
		13.	Provident Fund, Pension and other Retirement Benefits.
VI.		14.	Appropriation to Funds.

	Railway Funds and payment to General Revenues.	15.	Dividend to General Revenues, Repayment of lones taken from General Revenues and Amortization of over Capitalisation.
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While the classification upto the detailed head represents only the activity, the structure of the classification also incorporates a two digit code to represent the primary unit, i. e. the object of the expenditure/indicating on "what" the expenditure is incurred viz., salary, allowances, wages, materials, consumable stores etc. The indication of a classification of expenditure will, therefore, be complete only if the Abstract, the minor, sub or detailed heads of activity as well as the code of the object of expenditure are given, in that order for instance.

(i) The wages of the permanent gangs engaged in manual maintenance of a section of BG. track (with sanctioned speed of 100 km. p.h. - i.e. a group 'D' track) will be indicated as B. 241-01.

(ii) Ballasting of the same track will be indicated by B. 243-28.

(iii) The wages of Steam Loco crew will be indicated as F. 112-01.

(iv) The wages of a Diesel Loco crew will be indicated as F. 212-01.

(v) The kilometrage allowance of Diesel Loco crew will be indicated as F. 212-10.

(vi) The dearness allowance of train passing and Control office staff such as Station Masters, Assistant Station Masters etc. will be indicated as G. 250-02 and so on,

It will be noted that last two digits show the "object" of expenditure.

In order to make the new classification "function" and "activity" oriented the following major changes have been made in the new classification as compared to the existing ones: -

(i) The expenditure on salary and allowances of those officers who are directly connected with the work of maintenance in the field will be charged to the respective Abstracts on Repairs and Maintenance instead of to General Administration as at present e.g. Bridge Engineers in-charge of Bridge Engineering Workshops, Workshop Officers (such as Superintendent of Workshops, Works Managers etc.), Senior DEEs. In-charge of Electric Loco Sheds etc.

(ii) The expenditure on repairs and maintenance of staff quarters and welfare buildings which used to be charged to existing Abstract 'A'-Maintenance of Way and Works will now be charged to Abstract 'J'--Staff Welfare and Amenities.

(iii) The Repairs and Maintenance of Plant and Equipment of all Departments which used to be charged to the respective Maintenance Abstracts such as 'A', 'B','C' etc., will now be charged to a separate Abstract for Repairs and Maintenance of Plant and Equipment viz., Abstract 'E'.

(iv) Operating Expenses for Rolling Stock and Equipment which is part of the existing Abstracts 'B', 'C', 'D', 'H' and 'J' will all be charged to a separate Abstracts for Operating Expenses for Rolling Stock and Equipment viz., the new Abstract 'F' and Operating Expenses forming part of existing Abstract 'E' and 'G' will be charged to Abstract 'G' and 'K'.

(v) The expenses of the Medical Department, which used to be charged to Abstract 'F' under General Departments will now be included in new Abstract 'J' Staff Welfare and Amenities.

(vi) Expenditure of the Security Department and related expenses such as Order Police and payment to State Governments in this connection, which used to be included under the existing Abstract 'F' for General Departments will now be charged under Abstract 'K' for Miscellaneous Working Expenses.

(vii) The retirement benefits to staff such as the contribution of bonus to S. R. P. F. gratuities, Special contribution to Provident Fund which used to be charged to Abstract 'G' Miscellaneous Expenses and the payment of the pension and other retirement benefits which were charged to Abstract 'N' will now be charged to separate Abstract for Provident Fund, Pension and other retirement benefits Abstract 'L'.

(viii) The Abstract 'K' for purposes of recording Miscellaneous Expenses includes the payment of Compensation Claims, which used to be booked under different Abstracts under the existing scheme.

(ix) The appropriation to Depreciation Reserve Fund which used to be booked under Abstract 'K' and appropriation to Pension Fund which used to be booked under Abstract 'M' under the existing arrangement are now both booked under Abstract 'M' -Appropriation to Funds.

(x) The expenditure under Suspense which used to be charged to Abstract 'I'-Suspense will now be charged to Abstract 'N'-Suspense.

### Special Mention to Classification of Revenue Expenditure

- Preliminary expenses of all kinds connected with all surveys including the Final Location Survey of the line, preparation of plants and estimates for the project and administrative and general charges incurred after the Abstract Estimate of a project is sanctioned and before the work construction is completed are initially charged to "345- Indian Railways - Policy, Formulation, Direction, Research and other Misc. Organisations-Surveys" and transferred to head 1110 when the construction of a project has been actually completed. The cost of preliminary expenses connected with extensive alterations to a project requiring the employment of a distinct staff after the general project has been sanctioned or commenced should also be initially charged to "345-Indian Railways-Policy, Formulation Direction, Research and other Misc. Organisations-Surveys" and transferred to this head when the project has been completed. The cost of petty alignment etc. for which no special staff is engaged should be charged to the estimates for construction.

- For the purpose of above rule, a construction should be deemed to have been 'completed' when the line is opened for any kind of traffic. The adjustment from "345 - Indian Railways - Policy Formulation, Direction, Research and other Misc. Organisations-Surveys to this head (1110) should therefore be made in the year in which the line is opened for any kind of traffic.

- All preliminary expenses relating to surveys including Final Location Surveys are initially charged to "345 - Indian Railways Policy, Formulation, Direction, Research and other Misc. Organisations - Surveys" and transferred to the heads 1111, 1112, 1113 when the construction of a project has been completed.

- Miscellaneous head (1114) is intended to record all items of expenditure which cannot be recorded under any of the other prescribed heads of classification. The expenditure earlier booked under the minor head Cap-VIII Miscellaneous would be booked under this head. The details of this expenditure in the printed accounts should continue to be shown as before.

- Land (1120)- includes all expenditure incurred in acquiring land, viz., compensation to the owners or occupiers of such land including payments for houses, trees, crops or other property situated on such land; compensation for damages, loss or injury caused to adjacent property by operations incidental to the construction of the railways, salaries, fees, allowances, etc. of civil officer and other persons deputed or employed on the valuation, transfer or demarcation of land, and all charges connected with the primary dabbling and temporary marks necessary to enable the civil authorities to determine the boundaries.

*Exceptions- (a) The compensation payable for land acquired temporarily under Section 35 of the Land Acquisition Act, should be charged to the work or purpose concerned.*

*(b) Land required for the manufacture of materials, also for the acquisition of material by quarrying, mining, boring or other operation, and payments for royalty, mining rights, etc., connected with the same are not chargeable to this heads but may be dealt with as part of the cost of the manufacturing operations or if more convenient, charged off finally to the work concerned.*

*(c) Permanent boundary marks are included under "1145-Fencing".*

- Earthwork (1131) includes all charges in connection with the earthworks in formation of embankments and cuttings (except those under "Preliminary Expenses" or "Land") pitching turfing or other protection to such earthwork including retaining walls, side drains, catch water drains etc., tree planting, service roads, also diversion of roads, streams or rivers incidental to the execution of such earthworks; all repairs and maintenance necessary to keep the earthwork in proper order until the opening of the line.

- Walling - Includes all charges connected with the retaining or revetment of walls, breast

walls, etc. that may be required either to hold up the sides of a cutting or to support formation in embankments.

- Side drains - All charges connected with side drains and cutting catch water drains are included in this head.

- Tunnels (1132) includes the cost of tunnels and subways for the passage of trains, including apparatus for ventilating and lighting service therein. Each tunnel is to form the subject of a separate estimate, each different class of work appearing as a distinct item with its own quantities, rate and cost. Diversions of the Railway, plant for rope inclines and other works required for temporary use during the construction of a tunnel are chargeable to the estimate of the tunnel concerned. This head should include the cost of Waling and side drains provided in connection with tunnels.

*Note.-The incidental works such as diversions of roads, etc., usually found necessary when rebuilding a bridge or a tunnel or carrying out any 'betterments' on an open line of railway, may be divided into two main classes as follows:--*

*(a) Works which are essential for the execution of the main work and which would have to be carried out in any case even if either the line had not been opened to traffic or the normal working of trains could be discontinued during the progress of the main work.*

*(b) Works which are essentially necessary for the continuance of the normal working of trains during the progress of the main work. The cost of all works in category (a) which are obviously unavoidable and are not required merely to maintain the earnings of the railway at their normal level should be allocated to the main work concerned. The works in category (b) should, however, be treated as a revenue charges as the expenditure thereon is necessary in order that railway might continue to earn money while the main work is in progress.*

- Permanent Way (1141 -43) - includes the provision and laying of all permanent way complete over the entire main line and sidings with all sleepers and fastenings including bridge sleepers and all points and crossings with the special sleepers required for the purpose and all level handles, etc. and their maintenance in good order until the opening of the Railway. These

heads will include the cost of permanent way provided in workshop, stores buildings, etc.

*Exception - All rodding and interlocking appliances of every description should be excluded from this head. These are to be provided for under the detailed-head "1173 Electric telegraph and train control equipment including all signalling and Interlocking machinery.*

- Ballast (1144) Includes the cost of gravel, stone, slag cinders, sand and the like materials use in ballasting track of the main line and over bridges where necessitated by the design, to the full section required by the specification and also the maintenance of the same until the opening of the Railway. The cost of ballast train service and of unloading is also charged to this head.

- Fencing (1145) includes the cost of fences, walls, palings, hedges, ditches, permanent boundary marks cattle guards at station and level crossings, and other means employed for demarcation of or prevention of, trespass on the land taken up for the railway Lines, stations, etc.

*Exception.-The cost of walls and fences, etc., of buildings and detached portions of lands kept for separate purposes such as, general offices, staff quarter etc., will be charged to the works concerned.*

- Road crossing including foot over / under bridges at stations and other places (1146) will bear the cost of level crossings, with gate bars, turnstiles, gatekeepers lodges, approaches and any signals or other appliances connected with the working of the same, as also expenditure on foot-over and under bridges at stations and other places.

- Major and minor bridges (1151-56) should include the cost of substructure and superstructure of bridges viaducts and culverts which carry the tracks of the railway over rivers, water courses ravines public and private roads and other railways. The cost of flood openings, spill causeways, openings for irrigation channels, road under and over bridges will also be included under this head. This heads will include guide banks, pitching, protection or river training and any incidental works connected with bridge.

*(i) The expenditure on river training works not connected with bridges should be charged to "1131 -Earthwork"*

*(ii) The cost of diversion of the railway incidental to the reconstruction of bridges or bridge works*



and any temporary means provided for crossing a river during the progress of work are also charged to this head. Diversion and temporary works incidental to bridge work on Open Line should, however, be dealt with in the manner indicated in the note under "Earthwork".

(iii) Bridges having a total waterway of 18 lineal meters or having a clear opening of 12 lineal meters or upwards in any one span are classed as "Major Bridges". All other Works of this nature are classed as "Minor Bridges".

(iv) "Steel work under the detail heads 1151 & 1154, represents the cost of girders and their erection including all staging therefor.

(v) "Masonry", under the detailed heads 1152 & 1155, comprises, excavation, Well curbs, well sinking, concreting of all sorts, cast iron pipes for support of girders, pointing and all works of a permanent nature, timbering foundations including cost of timber, pumping, lighting, temporary islands for pitching all well curbs, and other incidental works connected with masonry..

(vi) "Miscellaneous" under the detailed heads 1153 & 1156, includes guide banks, pitching, protection or river training and any incidental work connected with bridge but not included under Steelwork or "Masonry".

- Stations Sheds etc. (1162) include the cost of platforms, booking offices, waiting and refreshment rooms, running rooms, goods sheds, post and telegraph offices, latrines, for the use of passengers, roads and generally all station buildings connected with the passenger and goods traffic of the Railway.

- Workshop and Stores Buildings Including Electric power and stations and sub-Stations / Workshop and stores building (1163) include the cost of erecting, fitting or patterns shops foundries, smithies and other building specially intended for the construction erection or repair of steam or electric or diesel locomotive engines or carriage and wagon stock or for other mechanical work required for the purposes of the line after opening for traffic, buildings and plant used for the production of gas, columns, chimneys, pits and other structures forming an integral part of the building itself as distinguished from articles of plant and machinery. All offices, out-buildings, enclosure walls, roads etc., belonging to or in connection with the workshops and stores

buildings and store yards etc. are debited to this head.

- Electric Power stations and Sub-stations should include the cost of buildings of power plants erected to generate and distribute power for the operation of trains and cars, to furnish power, heat and light for stations shops or general purposes. Foundations except those special to particular machines and other apparatus, drainage water and sewer, pipes and their connections and fixtures.

Exceptions - (i) Permanent foundations for both light and heavy tools and machinery whether in shops or sheds or in power stations, should be included in the charges of the machine concerned.

(ii) Small workshops attached to engine sheds for carrying out petty repairs to running engines is to be estimated for as a part of engine shed under the sub-head "1167 station Machinery.

(iii) Temporary workshops for construction purposes are not chargeable to this head but to the estimate for the work concerned.

Note. - Estimates for workshops are to be made out for each group or set of buildings separately, the individual buildings or structures in each group appearing as distinct items, each having its own separate quantities and cost clearly show.

- Other Service Buildings (1164)- This heads shall include all other service buildings not covered by the detailed heads 1161 to 1163.

- Residential Buildings. (1165) - Quarters for the residence of the staff employed on the open lines, rest houses and all out-buildings, wells, fences and other works required in connection therewith.

Exceptions.- (i) Gatekeepers lodges at level crossing are charged to the head 1146- Road crossing etc.

### CLASSIFICATION OF EARNINGS

The earnings of Railways are classified under three Sub major Heads with a separate abstract for each Sub major Head. viz-

1.	Abstract "X"-	Earnings from Coaching traffic.
2.	Abstract "Y"-	Earnings from goods traffic.
3.	Abstract "Z"-	Sundry other earnings.

The Sub major Heads are divided into Minor, Sub and Detailed heads are shown below-

It is not within the competence of Railway Administration to introduce, abolish, change the nomenclature or re-arrange any of the Sub major, minor and sub-heads. They may, however, introduce or abolish any of the detailed heads under any of the sub-heads.

The various heads of classification will be referred to by the numbers allotted to them prefixed by the letter of the Abstract under which they occur. Thus the detailed head "Season and Zone tickets" will be referred to as "X-122" (X-one-two-two);

#### CLASSIFICATION OF EARNINGS

X. 110	<b>full fares-</b> Earnings from Saloons attached to ordinary trains are also included in this head.
X. 120	<b>Reduces fare</b> -Theatrical and other parties may be shown under separate detailed heads under this item if considered necessary.
X. 141	<b>Reservation charges</b> -All classes records all earnings realized as "Reservation charges."
X. 200	<b>Special trains and reserved Carriages</b> Records all receipts on account of special trains and reserved carriages whether for supply of engine power or for fares.
X. 610	<b>Special postal trains.</b> -Total receipts, including those for engine power and haulage of parcels, should be shown against this head.
X. 710	<b>Penalties levied for irregular travelling</b> -Does not include excess fares which are classified under the sub-heads to which ordinary fares are Credited.
X. 732	will also include clerkage Charges for the tickets made non-issued.
X. 810 & Y. 810	<b>Refunds of earnings Collected</b> refund in respect of a particular transaction presupposes an earlier receipt of money with respect to that transaction- whether in cash by book adjustment. Consequently, overcharges or freight not collected by stations at the time of delivery of goods in connection with inwards 'To-Pay' traffic, as also overcharges on Warrants and credit Notes discovered before the debits is raised against the departments concerned, should not be shown under this head.
Y. 300	<b>Military traffic-</b> includes military live stocks.
Z 242	<ul style="list-style-type: none"> <li>i. Commercial licensing of Railway land (ordinary commercial plots, warehousing bulk oil installations, oil depots, steel yards &amp; coal dump, private siding etc.)</li> <li>ii. Licensing of land for tehbazari, shopping</li> <li>iii. Licensing of land for Grow More Food</li> <li>iv. Deleted</li> <li>v. Land licence given to Forest Department</li> <li>vi. Land for concrete sleeper plant</li> <li>vii. Land given to CONCOR</li> <li>viii. Land given to Defence Department</li> <li>ix. Other incomes (long term lease, building rent for GRP, P&amp;T, maintenance and operational charges of level crossing &amp; sidings and license)</li> <li>x. Any other licensing except for property development</li> </ul>
Z-243	The earnings from development of Railway land/air-space will be booked under Z-243.
Z-330	<b>Haulage cost of pantry cars-</b> Records all receipts from IRCTC for haulage of pantry cars.
Z 510	<b>Unclaimed and Damaged Goods.--(a)</b> Unrecovered freight demurrage etc. on each consignment of unclaimed or damaged goods or parcels etc. should be charged to the sale proceeds/realisation from other departments etc. of such consignments, the balance, if any, of the sale proceeds / realisation being adjusted as under: i) Minus debit to relevant detailed heads for compensation under Minor head K200 where a link between compensation payment and realisation from the disposal of unclaimed goods etc. is established with in the same financial year;

	<p>(ii) Credit to K-900 where such a link is not established within the same financial year, but liability for compensation payment is implied, and</p> <p>(iii) Credit to sundry earnings where no liability for compensation payment e- g. for unclaimed articles / luggage etc. left at station by passengers/Railway users etc is implied.</p> <p>(iv) Any repayment should be adjusted to the head to which the net realisation was originally credited but in the case of earnings - however, it will be booked under Deduct refunds.</p> <p>b) In case however, where a consignment of goods or parcels is lost or where the sale proceeds of any damaged consignment are not sufficient to cover freight demurrage etc. thereon, the latter or the excess of the latter over the former (as the case may be) should be deleted to the compensation account (detailed heads in Abstract K-200) if the sale proceeds of an unclaimed consignment of goods or parcels are not sufficient to cover freight, demurrage, etc. thereon, the latter or the excess of the letter over the former should be written off.</p> <p>c) In exceptional cases, however, where a number of consignment are sold in one lot and the sale proceeds of individual consignment cannot be ascertained, the aggregate of freight, demurrage etc. on all such consignment should be adjusted against the sale proceeds in proportion to the credits adjusted under a (i) to (iii) above and adjustments carried out as in (b) above.</p>
Z 650	<b>Other unclassified receipts.</b> -Include items of the nature of -
	<p>(1) Survey fees received from private bodies. (2) Receipts of the Publicity Department of individual Railways. (3) Cost of tender forms supplied to contractors on open lines (4) Maintenance charges of approach roads to oil sidings. (5) Charges for printing work done for Railway institutes, sports, clubs, etc. in Railway Press. (6) Cost of Stores Bulletin supplied to outsiders. (7) Commission received from State Government for auditing the warrants issued by them to their police staff (Commission recovered from the Military Department on account of audit of Warrants and Credit Notes in connection with military traffic is taken as reduction of expenditure). (8) Commission received from catering contractors for auditing meal tickets, etc. issued to them. (9) Commission received from local bodies for auditing the amount of pilgrim tax collected on their behalf. (10) The amount recovered on account of salary, travelling allowance and contingent expenses of staff auditing the accounts of Out-Agencies. (11) Charges for conservancy to Postal and Police Departments. (12) Commission realized for collection of cess on soft coke. (13) Commission realized for collection of terminal tax. (14) Trade test fees received from the Military Department. (15) Amount recovered from vendors and others on account of cost of water supplied to them. (16) Amount recovered from vendors and outsiders for conservancy charges. (17) Fines recovered from vendors. (18) Recoveries from occupants of Railway rest houses on account of oil and electric charges. (19) Hire charges recovered for the use of motor cars and trolleys of one department to another or outside bodies. (20) Water charges on residential buildings recovered from employees of the Railway Department (21) Cars and vendors license fees. (22) Forfeited deposits. (23) Forfeited State Railway Provident Fund Bonus of Gazetted officers. (24) Stall (25) Amounts recovered from departments or ministries of the Government of India, etc. on account of work done for them in the Railway Laboratories. (26) Recoveries on account of diet or subsistence money to Railway servant summoned by court to give evidence. (27) Amount forfeited from Railway servants in lieu of notice of termination of service. (28) Excess cash.</p>

## Annexure 1

### Demands for Grants

(Source: Para 307 of Financial Code, Vol. I)

The following are the various Demands for Grants.

Grant No.	Particulars
1	Railway Board
2	Miscellaneous Expenditure (General).
3	General Superintendence and Service.
4	Repairs & Maintenance of Permanent Way and Works.
5	Repairs & Maintenance of Motive power.
6	Repairs & Maintenance of Carriages and wagons.
7	Repairs & Maintenance of Plant and Equipment.
8	Operating Expenses - Rolling stock & Equipment.
9	Operating Expenses - Traffic.
10	Operating Expenses - Fuel.
11	Staff Welfare & Amenities.
12	Miscellaneous working expenses.
13	PF, Pension & Other Retirement Benefits.
14	Appropriation to Funds.
15	Payment of Dividend to General Revenues.
16	Assets - Acquisition, Construction & Replacement.

## Annexure 2

### Types of possible Mis-classification

(Source: Para 405 of RAM)

#### 1. Mis-classification between Deposit work and Capital

- In "A" division of this Railway a sum of Rs. 3500(000) was booked in a Deposit Work instead of Capital. The booking for the Deposit Work is not correct as the estimates for the Deposit Work was not even sanctioned during the booking. Further as the Deposit Work was carried out for the State Government, utilisation of the amount meant for them is not correct. In view of this, the case is treated as a case of Misclassification between Deposit and Capital.

#### 2. Mis-classification between DRF and Capital

- In "B" division of this Railway a sum of Rs. 1854(000) was booked in a Capital work instead of DRF. An E.O.T crane meant for the workshop was purchased under a work in DRF. However the above said amount was booked to a Capital work. The booking in Capital was not correct as the preliminary requirements for the work were not ready. Further, the specifications of the E.O.T crane were different for the two works. Hence this is a case of Misclassification between DRF and Capital.

#### 3. Cases of Mistake in Accounting

- In "Y" unit of this Railway it was noticed that transactions pertaining to the Year 1993-94 were adjusted in the year 1994-95. The transactions which took place at the fag end of the year were not immediately booked and reconciled during the closure of the Accounts for the year ending 1993-94. However these were carried out to the subsequent year and adjusted. Hence this is a case of Mistake in Accounting.

#### 4. Mistake in Accounts

- In "A" unit of this Railway it is noticed that transactions were adjusted with MTP Railways without physical transfer of materials. Adjustment memos were prepared and were accepted by both the consignee and consignor. However, the physical stocks were not at all delivered and this financial adjustment of materials without the transfer of materials is a case of Mistake in Accounts.

#### 5. Mis-classification between Charged and Voted

- In 'X' Division of this Railway it is noticed that interest payment @ 12% per annum for 6½ years on Rs.42,000 paid earlier. The expenditure has been treated as voted expenditure and booked under Grant No.12-230. As per Railway Board's order and as per the Financial Code Vol.II, the expenditure on ex-gratia compensation under WCA are to be booked to Grant No.13-730. Further the booking should be a Charged one as the expenditure is incurred after the judgment of CAT/MAS. Therefore booking of Rs.32,760 in Abstract K(12) Voted instead of Abstract L(13)-Charged is a case of misclassification between Grant No.12(Voted) and Grant No.13(Charged).

#### 6. Mis-classification between DRF and Revenue

- In 'X' Unit of this Railway, the cost of 'Two Dimensional Cardiac Scanner' was charged to Revenue instead of DRF. The amount involved was Rs.40.11 lakhs. The scrutiny of the Purchase Order revealed that the item was chargeable to the Revenue Demand No.11-232-28. In terms of para 758 of FI, all machinery and equipment should be purchased through M&P Programme. Further in terms of para 705(6) of F I there should not be undue burden on Revenue by Charging Plant and Machinery of higher values. On this being pointed out the Railway Administration pointed out, that the procurement was done as per the Railway Board's order. However, the interesting point to note in this case was that, the tender committee observed that the procurement be made in Revenue instead of through M&P Programme as the procurement stage has reached a final stage. Hence the Railway Administration did not make a reference to Railway Board and the procurement was done in Revenue instead of in DRF. This therefore is a case of misclassification between Revenue Demand No.11 and DRF.

#### 7. Mis-classification between Grant No.3 and Grant No.6

- It is noticed in 'Y' Unit of this Railway that the expenditure on Officers, Supervisors and Office Establishment in the Workshop dealing with repairs and maintenance of EMU coaches were being

booked to Grant No.3. In terms of the provisions contained in Financial Code Vol. II and the explanatory Note to Abstract 'A' 700, it is stated that the head is intended to record the expenditure on all Officers and their establishment at the Headquarters of the Railway or Divisional Headquarters excluding those who are directly in charge of a workshop Loco EMU Shed. Further in terms of Financial code Vol. II, the Head D.No.06-145 will record expenditure on Officers, Supervisors and Office Establishment in Workshop dealing with repairs and maintenance of EMU coaches. As it is clear from the provisions in Financial code Vol. II read with Abstract 'A' 700, the Booking of expenditure of Rs.26,53,552 in Grant No.3, instead of Grant No.6 is a case of misclassification.

### **8. Booking of Expenditure in MAR instead of Grant No.3**

- During the Review of Journal vouchers of 'X' unit it is noticed that an amount of Rs.20,55,554 was withdrawn from Grant No.3 and kept under MAR during 1994 - 95. The explanation for the Journal voucher was that the printing charges that were incurred during 1994 - 95 could not be allocated to the correct head and hence it is being kept under MAR. However, subsequently in September of 1995 - 96, the same transaction was reversed and once again debited to Grant No.3 duly clearing the MAR. This clearly indicated that due to excess in Grant No.3 the expenditure was withdrawn and re-debited to the same grant during the subsequent year. Further, there were no vouchers to support the claim that the Final Heads could not be located. This is a case of misclassification between Grant No.3 and MAR - Suspense.

### **9. Mis-classification of Allocation of Water Charges**

- In two divisions of this Railway, it is noticed that water charges meant for staff and welfare buildings were booked to Grant No.4 instead of Grant No.11. In terms of Financial Code Volume II, water charges meant for Station Buildings are to be booked to Grant No.4 and water charges meant for staff quarters are to be booked to Grant No.11. In one of the division's the water supplied to staff quarters were booked to Grant No.8 and in another Division, it was booked to Grant No.4. Therefore the booking of expenditure in Grant No.4 and 8 instead of Grant No.11 for water charges meant for staff quarters is a case of misclassification.

### **10. Mis-classification of allocation on adjustment of Security Deposits, Interest Charges under Revenue instead of Earnings**

- In 'S' Division of this Railway, it is observed that TNEB is claiming Security Deposit for current consumption and this deposit is being reviewed during the beginning of every year. Based on the average current consumption for the previous year, additional Security Deposit is claimed. While claiming the additional Security Deposit, credit is being allowed for the interest accrued on the existing Security Deposit at the rate of 5%. In 'S' Division, during 1994 - 95, an amount of Rs.5,50,555 has been allowed as interest for Security Deposit. It is seen that the net amount paid after deducting the credit for interest accrued only is being booked to the head MAR/X, the interest being treated as a reduction in expenditure. The above procedure was objected by Audit, since the interest accrued on Security Deposit paid is to be treated as income and not as a reduction in expenditure. The total amount of additional Security Deposit including the interest accrued on Security Deposit already paid is to be booked to MAR/X duly affording credit to Abstract Z for the interest accrued. This therefore constitutes a case of misclassification between MAR/X and Abstract Z earnings.

### **11. Mis-classification on booking of Brake Blocks in Grant No.6 instead of Grant No.8**

- In 'Y' Division of this Railway, it is noticed that Brake Blocks meant for the purpose carriage and wagon stock by Division was booked to Grant No.6 instead of Grant No.8
- Grant No.6 incidentally deals with Repairs and Maintenance of Carriage and Wagons. Any expenditure incurred on the consumable items like lubricants, carbon brushes, brake blocks, lamps, bolts, etc. incurred on these items by workshops will be booked to Grant No.6. It will thus form part of the normal schedule of P.O.H. If expenses for these consumable items are incurred, in the Divisions, it will be booked to Grant No.8 - Operating Expenses - Rolling Stock and Equipment. In the instant case as the expenditure was incurred for the carriage and wagon stock held in the Division, the booking of the same under Grant No.6 instead of Grant No.8 is a case of misclassification.

## Annexure A

*(Source: Para 396 of the Railway Audit Manual and Para 442 to 448 of the Indian Railway Financial Code Vol.I)*

### Statement of unsanctioned Expenditure

- In terms of para 442 of the Indian Railway Financial Code Vol- I each Railway Administration has to furnish a certificate to the Railway Board by the 30th November to the effect that all expenditure included in the Appropriation Accounts has been sanctioned by Competent Authority with the exception of items detailed in the statement of unsanctioned expenditure.
- The following instructions may be borne in mind while checking the above statement:
  - The total amount of expenditure placed under objection to end of the year should be taken into account to decide whether an item of objection should be considered as amounting to Rs.1 lakh or below Rs.1 lakh.
- The total amount placed under objection to end of the year is to be shown year wise as:
  - relating to earlier than previous year;
  - relating to the previous year; and
  - relating to the year concerned.
- The amount to be shown against each year will be the amount of expenditure incurred during that year, but not cleared up to the 1st October of the year following the year to which the statement relates.
- The information to be shown under the column 'Previous Year' should be the same as shown in the current year column of the statement relating to the previous year.
- The amount of total expenditure audited for the purpose of the percentage given in the footnote to the statement of unsanctioned expenditure should be the total expenditure as shown in the summary of the Appropriation Accounts.
- For the purpose of working out figures, to be exhibited in this statement the minus expenditure resulting from certain credit adjustments should be taken as plus, but the amount of expenditure should be correctly shown in Annexure A(i) as minus figures.
- The statements received from the various auditing units form the basis for the check of Annexure A prepared by the Financial Adviser and Chief Accounts Officer for submission to the Railway Board.

## Annexure B

*(Source: Para 433 of Financial Code Vol.I)*

**Statement of Undercharges Detected By Accounts And Audit. The following points may be borne in mind while checking this statement**

- For the purpose of this statement, amounts withdrawn, written off, cleared by overcharge sheets and recovered during the year concerned should be shown irrespective of the fact whether any portion thereto related to past years.
- The gross amount of earnings excluding refunds should be shown and not the net earnings;
- Individual items of undercharges amounting to Rs.2/- and below in the case of Goods earnings and 50 paise in the case of coaching earnings which are not debited to stations are excluded from the statement and suitable foot note in this connection is given
- It has been clarified by the Board that non-accountal/ delayed accountal of invoices and parcel way bills taken up during the course of the internal check does not constitute undercharges and as such should not be included in the amount of undercharges shown in Annexure B to the Appropriation Accounts.
- The amount of undercharges detected by Audit and recovered should be advised along with this Annexure to the Deputy Comptroller & Auditor General (Railways). The particulars should be furnished in the same form as Annexure B.



## Annexure- C

*(Source: Para 433 of Indian Railway Financial code Vol. I and Para 397 of Railway Audit Manual)*

### Statement of Remission and Abandonment of Claims to Revenue.

- The charges due on one consignment whether on account of wharfage or demurrage of both should be taken together for the purposes of classification of items as above or below Rs.25,000/-.
- Any remission or abandonment of considerable magnitude or of unusual nature should be suitably explained in the remark column.
- In respect of each item of Rs.25,000/- and over falling under the group 'Other Items', full details of the case, the circumstances under which recovery should not be made, action taken against the person responsible and steps taken to avoid recurrence of such remission or abandonment of claims should be furnished in the form of a note.
- The amount of undercharges foregone on account of ticket less travel, included in the total amount under 'other items' below Rs.25,000/- should also be shown in the note to the statement.
- All cases relating to the financial year concerned in connection with the charging of lower rates than those prescribed for tourists cars and saloons and waiving of the charges for empty haulage and hire should be included in the statement.
- Total amount of wharfage and demurrage charges accrued during the year should be advised to the Deputy Comptroller & Auditor General of India (Railways) while forwarding the audited copy of the Annexure.
- The break up of the wharfage and demurrage charges should also be ascertained and furnished to the Deputy Comptroller & Auditor General (Railways) along with the audited copy of the Annexure. *(Source: Addl. Deputy Comptroller & Auditor General of India (Railways) letter Nos.3593-RR/1-28/67 dated 18-9-1967 & No.3123- RR/2-31/68 dated 31-7-1968).*
- It should be seen that a note in the above statement is appended as under:
- The figures exclude undercharges of Rs.2/- and below in case of Goods Earnings and 50 paise and below in the case of Coaching Earnings; not debited to the station.
- The figures include amount due from ticket-less passengers and not recovered by Court or station records.
- The figures exclude undercharges of Rs.2/- and below, not adjusted with Defence Department and Foreign Railways.
- The figures exclude all items of losses of cash.
- The figures exclude all items of refund of demurrage and wharfage arising out of charges on account of error in rate calculation etc.
- There is no item of remission of demurrage and wharfage charges amounting to Rs.1 lakh or more.
- If the items above Rs.1 lakh are there, these should be listed individually and brief particulars supplied for each item.

## Annexure -D

(Source: Para 433 of Financial Code, Vol. I)

### Review of Expenditure on Important Open Line Works and New Constructions

(Covers review of Open Line Works and New Constructions detailing important works which were undertaken during the year without budget provision and works which were not undertaken although funds had been provided for the same; this review also compares the actual expenditure on the works physically completed during the year with the original estimate.)

(Figures in thousands of Rupees)

Railway	Name of work	Estimated Cost	Date of commencement	Expenditure during the year	Total expenditure incurred up to the end of the year	Remarks

**Part II** – Works costing Rs.50 lakhs or more for which budget provision existed but were not undertaken during the course of the year.

(Figures in thousands of Rupees)

Railway	Name of the work	Estimated Cost	Budget Provision	Remarks

Statement of Expenditure on Open Line Works and New Constructions costing not less than Rs.50 lakhs each.

**Part III** – Variation between Original Estimate and Expenditure in respect of Works completed during the year .....

(Figures in thousands of Rupees)

Railway	Description of Works	Original Estimate	Final Cost	Excess(+) Savings(-)	Remarks

In terms of Railway Boards letter No.61-AC1/17/5 Pt. Dated 30-12-1961, the scope of the Annexure has been revised and the Annexure now contains:

**Part I** : Works costing Rs.20 lakhs or more which are started during the year without any budget provision.

**Part II** – Works costing Rs.50 lakhs or more for which budget provision existed but were not undertaken during the course of the year.

**Part III** – Variation between Original Estimate and Expenditure in respect of Works completed during the year. This Statement is checked with reference to the Pink Book and Works Registers. The statement prepared by the Financial Adviser & Chief Accounts Officer is checked with reference to the audited copies received from units.

## Annexure -E

*(Source: Para 433 of Financial Code, Vol. I)*

### **Statement Showing Revenue and Capital Expenditure Relating To Strategic Lines.**

Statement of Expenditure on strategic lines is to be appended to the Appropriation Accounts. It is prepared in two parts, one showing Working Expenditure and Other Revenue Charges and the other showing Expenditure on Open Line Works and New Constructions from Capital or DRF. The figures of expenditure shown in these statements should be compared with the relevant figures appearing in the Account current for March.

## Annexure F

*(Source: Para 433 of Financial Code, Vol. I)*

### **Statement of Estimate and Actual Credits or Recoveries**

The figures of Estimated and Actual Credits or Recoveries as shown in the accounts of all Grants should tally with the similar figures appearing in Annexure F appended to the Appropriation Accounts.

## Annexure G

*(Source: Para 429 of Financial Code, Vol. I)*

### **(Block Accounts, Including Capital Statement Comprising The Loan Accounts) Balance Sheet and Profit And Loss Account.**

The figures in various statements comprising Annexure G should be checked from Capital Ledger and Account Current for March and with reference to the audited copies received from various units.

## Annexure - H

*(Source: Para 433 of Financial Code, Vol. I)*

### **Statement of Losses.**

The statement of losses should be checked with the register of losses and write off sanctions received **from** competent authorities from time to time.

- It may be ensured that losses that have not been written off are not inadvertently included in this statement.
- Whenever, the amount in respect of any item is more than Rs.25,000/- full details of the case are given when the loss is not due to natural calamities like flood etc.
- When loss is due to natural calamities, lump sum amount is exhibited indicating the details briefly.
- The statement compiled by the Railway Administration is to be checked with the audited copies received from the various audit units.
-

## Annexure -I

(Source: Para 433 of Financial Code, Vol. I)

### Statement of Irregular Re-Appropriations.

This statement may be checked with reference to Budget Orders/Re-appropriation Statements.

- It may be ensured that instructions on the subject have been sanctioned by competent authorities.
- Reappropriations made after the close of year are irregular and are to be included in this Annexure.

The various Audit Certificates to be signed by the Principal Directors of Audit are as under:

- (i) Appropriation Accounts and Balance Sheet of the individual Railways:

The Accounts forwarded herewith have been examined by me in accordance with the requirements of Article 149 of the Constitution of India read with the Provisions of the Comptroller & Auditor General's (Duties, Powers and Conditions of service) Act, 1971. I have obtained all the information and explanations necessary and according to the best of my information, and on the basis of certificates I have obtained from other Audit Officers, to the extent they are responsible for audit of these Accounts, I certify, subject to the observations made therein and in the Report of the Comptroller & Auditor General of India for the year....., Union Government (Railways)".

I have examined the foregoing Accounts and the Balance Sheet of ..... Railway. I have obtained all the information and explanations that I have required, and subject to the observations in the separate Report of the Comptroller and Auditor General of India for the year ..... , I certify as a result of my audit, that in my opinion, these accounts and Balance Sheet are properly drawn up so as to exhibit a true and fair view of the state of affairs of the Railway according to the best of my information and explanations given to me and as shown by the books of the Railway.

Sd/-

Principal Director of Audit

.....Railway

- (II) Capital and Revenue Accounts, Finance Accounts, Review of Balances and other Accounts of the individual Railways for the year ending with March accounts:

#### Audit Certificate

*Certified, as a result of the test audit of the accounts compiled under the direction of the General Manager that, subject to the observations below, the (name of the Account) of the ..... Railway for the year ending 31st March ..... have, to the best of my knowledge and belief, been correctly prepared.*

Sd

Principal Director of Audit

- (III) March Accounts of the individual Railway before their submission to the Railway Board (Accounts)

*Compared with the office copy and found to be a true copy.*


Sd/

Principal Director of Audit

Slide 1

**Session: 4**

**Audit of Railway Accounts**




Training Module on 'Audit of Railways; Session:4

Slide 4

**Budget**

- Budget may be defined as a forecast of annual receipts and expenditure of the Central Government.
- The proposed expenditure included in the budget is of two kinds-
  - Voted
    - Items for which the provision of funds is subject to the vote of the parliament
  - Charged
    - Items of expenditure which are sanctioned by the President and are not subjected to vote.




Training Module on 'Audit of Railways; Session:4

Slide 2

**Learning Objective**

- In this session, the participants will be able to understand the basic concepts of the accounting system of the Indian Railways which will help them to focus on audit issues in the work context.




Training Module on 'Audit of Railways; Session:4

Slide 5

**Budget contd.**

- Authorities are required to submit Revised estimates for the current year and Budget estimates for the ensuing year to the Railway Board.
- Estimates are prepared for each demand.
- Revised estimates and Budget estimates are normally submitted to Railway Board during Nov. /Dec. of each year.




Training Module on 'Audit of Railways; Session:4

Slide 3

**Railway Accounting Structure –  
Basic Concepts**

- The accounts are maintained separately for Revenue and Capital and are divided into three parts.
  - Consolidated Fund of India,
  - Contingency Fund of India,
  - Public Accounts.




Training Module on 'Audit of Railways; Session:4

Slide 6

**Budget contd.**

- Estimates or Demands for Grants are recommended by the President and voted by the Parliament. These are then called "Grants" available for expenditure.
- Final modification usually comes as the final grant.




Training Module on 'Audit of Railways; Session:4

Slide 7

**Flow of Accounts**

- Grants and the appropriations for the Charged Expenditure are distributed by the Railway Board.
- Sums distributed are called 'Allotments'
- Orders by means of which the allotments are made are called 'Budget Orders'
- Detailed distribution of the Budget Allotment to the Railway Administration contains allotment for
  - Working Expenses,
  - Capital and Capital Fund,
  - Depreciation Reserve Fund, Development Fund and
  - Open Line Works Revenue.




Training Module on 'Audit of Railways; Session:4' 7

Slide 10

**Flow of Accounts**

- Minor-Head/Sub-Head represents
  - Major functional activities
- Detailed Head represents
  - Identifying the expenditure in greater detail.
- The primary unit represents
  - The object of expenditure i.e. salary, honorarium, allowances etc.




Training Module on 'Audit of Railways; Session:4' 10

Slide 8

**Flow of Accounts**

- The classification of an expenditure is on the basis of the nature of expenditure and the Department to which it pertains. The various demands of grants are enumerated in the Annexure.
- The classification under each Demand or Grant is divided into three parts namely:
  - Minor Head
  - Sub-Head
  - Detailed Head




Training Module on 'Audit of Railways; Session:4' 8

Slide 11

**Budget Process**

- Contains three elements-
  - A review of the preceding year;
  - An estimate of the receipts and expenditure of the coming year; and
  - Proposals, if any, for meeting the requirements of the coming year.




Training Module on 'Audit of Railways; Session:4' 11

Slide 9

**Flow of Accounts**

- The classification is in the form of 7 digits for Revenue and 8 digits for Capital expenditure:

Revenue	Capital
04-121-01	20-1131-03
04 - Demand No 4	20 -Capital
121 -Detailed head	1131 -Detailed head
01 -Primary unit	03 -Primary unit




Training Module on 'Audit of Railways; Session:4' 9

Slide 12

**Budget Process**

- Annual process contains-
  - Annual Budget
  - Budget Allotment
  - August Review and Revised Estimates
  - Supplementary Grants
  - Final Modifications
  - Final Grant




Training Module on 'Audit of Railways; Session:4' 12

Slide 13

**Annual Budget**

- Requirements of funds will be advised by the Budget Officer/Division and by the Departmental Officers.
- Accounts Officer will vet and forward these estimates to the HOD concerned
  - and endorse a copy to the FA&CAO (Budget) along with a copy of the estimates vetted by him.




Training Module on 'Audit of Railways; Session:4 13

Slide 16

**Budget Allotment contd.**

- List of Works and Machinery costing over Rs.50,000/- each but less than Rs.5,00,000/-, are issued separately by the Railway Board in the form of a booklet.
- In case of works and machinery costing less than Rs.50, 000/- each, only a lump sum provision is indicated therein.
- As regards the 'Track Renewal Works', the list of works costing Rs.50,000 each or more which have been approved are forwarded to the Railway Administrations by the Railway Board separately.




Training Module on 'Audit of Railways; Session:4 16

Slide 14

**Annual Budget contd.**

- Estimates are scrutinised by the FA&CAO;
- Modifications are discussed with the HODs;
- Final requirements are advised to the Railway Board;
- The detailed procedures for the preparation of budgets by the Railway Administration are contained in paragraphs 309 to 353 of the Indian Railway Financial Code Volume I.




Training Module on 'Audit of Railways; Session:4 14

Slide 17

**Budget Allotment contd.**

- At the beginning of each financial year, the following Budget documents are received from the Railway Board and distributed to the Sections/Divisions.
  - Budget Speech.
  - Budget Statement.
  - White Paper
  - Book of Demands.
  - Works, Machinery and Rolling Stock Program of the concerned Railway.
  - Works, Machinery and Rolling Stock Program of the Railway Board.
  - Works, Machinery and Rolling Stock Program of the Railways- Part - I and II.
  - List of approved works, costing over Rs.50, 000/- each and upto 5 lakhs each - Each Railway.




Training Module on 'Audit of Railways; Session:4 17

Slide 15

**Budget Allotment**

- In the case of Railway Grants
  - Budget Allotments under the various sub-heads of the several grants, as approved by the Parliament are found in the Book of Demands for grants;
- in the case of Civil Grants
  - In Budget Orders
- In case of expenditure on Works, Machinery and Rolling Stock
  - Details of the Works etc., approved and the provision of funds made thereof are found in the Final Works, Machinery and Rolling Stock Programme of the Individual Railway.




Training Module on 'Audit of Railways; Session:4 15

Slide 18

**Supplementary Grants**

- Based on the August Reviews and Revised Estimates of the individual Railways, the Railway Board presents a supplementary demand to Parliament for their vote.
- The funds so allotted to the Railway will be distributed in the same manner as the Original Grant.
- The checks exercised on the distribution statements of Original Grant will apply mutatis mutandis to the above distribution statements also.




Training Module on 'Audit of Railways; Session:4 18

Slide 19

**Civil Grants**

- In case of Civil Grants viz.,
  - *'Interest on debt and other obligations and reduction or avoidance of debt'* and
  - *'Loans and advances bearing interest'*, the figures of additional allotments to be made are advised to the Railway Board by the Administration so as to reach the former by the 15th February of each year;
- This will be treated as final and no change can be made in the allotment of these grants.




Training Module on 'Audit of Railways; Session:4 19

Slide 22

**Appropriation Accounts contd.**

- After the March Account Current is finalised,
  - Accounts Department prepares Appropriation Accounts statement of actual expenditure.
  - These statements are sent to Railway Board/ Pr. Director of Audit.
  - Pr. Director of Audit certifies these accounts with remarks.
- PAC examines the same on behalf of the Parliament.




Training Module on 'Audit of Railways; Session:4 22

Slide 20

**Final Grant**

- Based on the needs, the Railway Board advises the Railway Administration on the amount fixed as final grant in respect of the several demands for grants before the close of the financial year.
- The funds so allotted are distributed to the various authorities in the same manner as the original Grant.




Training Module on 'Audit of Railways; Session:4 20

Slide 23

**Appropriation Accounts contd.**

- Form of Appropriation Accounts is fixed by the Public Accounts Committee
- Form would exhibit the variations from the amounts sanctioned by the Parliament in the form of Budget and Appropriations.
- Form is adopted on a uniform basis both on the civil side and on the Railway side as the Railway Budget is a part of the Central Government Budget.




Training Module on 'Audit of Railways; Session:4 23

Slide 21

**Appropriation Accounts**

- Railway Budget
  - An instrument of Parliamentary Financial control,
  - All "Voted" expenditure must receive Parliament's prior approval,
  - Actual expenditure incurred against the grants should be reported back to it, through the Public Accounts Committee.




Training Module on 'Audit of Railways; Session:4 21

Slide 24

**Audit Points on Appropriation Accounts**

- The accounts have been rendered properly
- Expenditure shown in the accounts were legally available / applicable for the charged service.
- The expenditure conforms to the authority which governs it.
- Every re-appropriation has been made in accordance with the provision under the Rules.




Training Module on 'Audit of Railways; Session:4 24



Slide 25

**Audit Points on Appropriation Accounts cont.**

- Mis-classification between one Grant and another.
- Double Booking.
- Mistake in Accounting.
- Financial Transfer without physical transfers of materials and vice versa.
- Actual expenditure exhibited in the Appropriation Accounts should be checked with reference to the figures in the Account Current and the details of grant wise actual.




Training Module on 'Audit of Railways; Session:4 25

Slide 26

**Audit Points on Appropriation Accounts cont.**

- It should be ensured that the limits of variation specified in the codes are not applied by the individual Railways and that the explanations are invariably given for all variations irrespective of the amount involved.
- It should be ensured that the works included in the 'Pink Book' have been classified correctly depending on the nature of the work and the correct source of funding.




Training Module on 'Audit of Railways; Session:4 26

Slide 27

**Demands for Grants**

□ Following are the various Demands for Grants

Grant No.	Particulars	Grant No.	Particulars
1	Railway Board	9	Operating Expenses - Traffic.
2	Miscellaneous Expenditure (General).	10	Operating Expenses - Fuel.
3	General Superintendence and Service.	11	Staff Welfare & Amenities.
4	Repairs & Maintenance of Permanent Way and Works.	12	Miscellaneous working expenses.
5	Repairs & Maintenance of Motive power.	13	PF, Pension & Other Retirement Benefits.
6	Repairs & Maintenance of Carriages and wagons.	14	Appropriation to Funds.
	Repairs & Maintenance of Plant and Equipment.	15	Payment of Dividend to General Revenues.
	Operating Expenses - Rolling stock & Equipment.	16	Assets - Acquisition, Construction & Replacement.



Training Module on 'Audit of Railways; Session:4 27

# **Session: 5**

## **Railway Traffic and Audit of Earnings**

<b>Session Title: Railway Traffic and Audit of Earnings.</b>		Session Guide
<b>Instructor's Guide</b>	Reference	Participants' Response
<b>Session Overview</b>		
<b>Welcome</b> participants to the session and remind them that their active participation is critical for the success of each session.	Lecture	
<b>Learning Objective</b>		
<b>Inform:</b> Given the inputs of Traffic and Earnings of Indian Railways through group discussion, lecture and PowerPoint slide show, the participants will, at the end of the session, acquire basic concepts of the Audit of Traffic and Earnings of the Indian Railways which will help them to focus on audit issues in the work context.	Lecture	
<b>Basic Concepts</b>		
<b>Discuss:</b> <ul style="list-style-type: none"> <li>● Over view of Traffic and Earnings of Indian Railways.</li> <li>● Organisation, Functions and Accounting of the Commercial Department.</li> <li>● Accounts Office Balance Sheet.</li> <li>● Traffic Book, Mechanisation of Traffic Accounts Procedure.</li> <li>● Operational Procedures.</li> <li>● Catering and Vending.</li> </ul>	Lecture with Power Point Slide show <b>Session 5 AUDIT OF RAILWAY TRAFFIC</b>	
<b>Application:</b>		
<ul style="list-style-type: none"> <li>● Distribute Illustration I with questionnaire</li> <li>● Request the participants to answer the questionnaire.</li> <li>● Distribute the solutions to Illustration-I</li> <li>● Discuss the solutions by comparing participants' answers and elicit the views of participants as to actual audit observations.</li> <li>● Distribute Illustration II with questionnaire</li> <li>● Request the participants to answer the questionnaire.</li> <li>● Distribute the solutions to Illustration-II</li> <li>● Discuss the solutions by comparing participants' answers and elicit the views of participants as to actual audit observations.</li> </ul>	Session 5 Illustration I and solutions  Illustration II and solutions	
<b>Summarise:</b>		
<b>Distribute</b> Participants' Note. <b>Tell</b> the participants that during the session, we discussed Organisation, Functions and Accounting of the Commercial Department, Traffic Book, Mechanisation of Traffic Accounts Procedures, Catering and Vending Procedures. <b>Invite</b> questions on themes discussed. If participants have any doubts/clarifications about themes, clarify the same. Answer participants' queries. <b>Thank</b> the participants and bring the session to a close.	Session 5 Participants' Note	

**Training Method:** Interactive Lecture and Power Point Slide Show.

**Materials Required:** Power Point Slides, Projector, White Board, Marker Pen and Participants' Note.

## Session Title: Railway Traffic and Audit of Earnings.

### Session Overview:

Indian Railways is one of the largest railway networks in the world, with a route length of 63,372 kilometer as of 31-3-2006 and has developed over a long period of time a fairly strong and robust accounting system. In **2005-06**, the number of passengers carried was **5832.39** millions, as against **4,583** millions in **1999-2000**, an increase of **27.27 per cent**. Indian Railway is also the single largest freight carrier of the country carrying **853.38** million GTKM in **2005-06** and earning a revenue of Rs. **36,286** crore (approx). Goods are booked on **8000** odd booking station and sidings and more than **8 Lakh** (approx) invoices are issued every month. Thus the main business of the Railways is to generate transportation services, which is a collective effort of the different departments. Chief Commercial Manager on behalf of the Railways is responsible to sale those services to the valid customer and correct collection, accountal and remittance of traffic receipt to the recognized cash office / bank lodgment. The associated Accounts Deputy Chief Accounts Officer (Dy/CAO/TA) Branch has a two-fold system of verifying i.e. indoor & outdoor verification, the correct accountal of the transaction taken place at stations / goods booking point / sidings etc. Travelling Inspector of Accounts (TIA) on behalf of the Traffic Accounts office carry out the spot verification of individual transactions, proper accountal, preparation of different returns and correct remittance of cash to recognized cash office. On the other hand accounts of earnings are rendered to the stationery accounts staff with the help of various returns and correlated records such as Passenger Classification, collected tickets, Parcel Way Bill, Invoices, Credit Notes, Warrants, Station Cash Pay Orders etc.

These documents are checked and brought to accounts in a consolidated form/ record for the entire railway in the Traffic Book in which earnings are classified into Coaching, Goods and Sundries.

### Passenger Business

- Passenger services constitute nearly 60 per cent of the transport output but contribute only 29.87 per cent, as of 2005-2006 to the revenue. In spite of a substantial increase in passenger business during the last two decades both in terms of Passengers Carried as well as Earnings Derived from them, losses on account of Passenger Services and other Coaching Services amounted to Rs. 9233 crore [2005-2006].
- Within the Passenger segment, Suburban Passenger Services accounted for an earnings of Rs. 1371 crore [2005-2006].
- However, in terms of passenger kilometer, the Suburban Passengers accounts for only 20 per cent. Suburban passengers though 60 per cent in terms of volume, contribute only 10 per cent to the passenger revenue. On the other hand Upper Class travellers, though they comprise less than one per cent originating passengers, account for around 20 per cent of the passenger revenue.
- Almost 100 % of the reserved accommodation is being made through the nationwide computerized Passenger Reservation System at nearly 700 locations, using 3000 computer terminals. Comparative figures of last two decades relating to passenger carried [in million] and earnings [Rs.in crore] derived are placed below for better appreciation.

**(Source:1-** Performance Budget 2007-2008

2- Annual Statistical Statement 2005-06)

- It is evident from the comparison of passenger traffic earnings with other earnings that the volume of increased passenger traffic earnings is due to:

(a) an increase in passenger fare

(b) an increase in average lead per passenger.

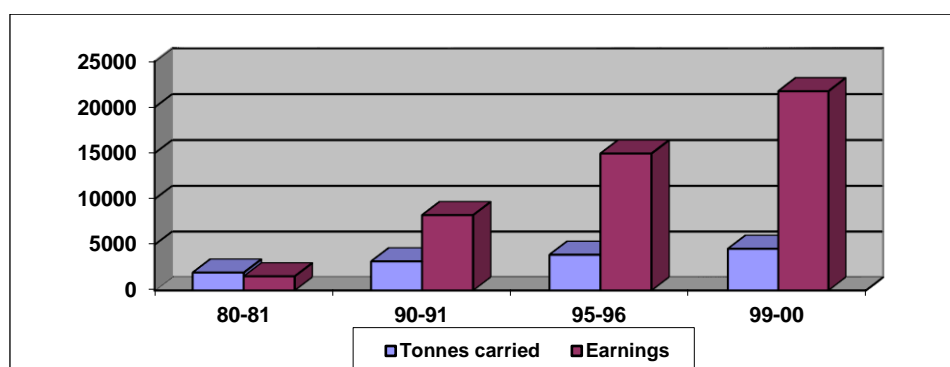
## Freight Business

• In the present day scenario, as a means of transport, Indian Railways are more inclined to carry bulk traffic in trainloads, which is mainly offered by the core sector. Almost 90 per cent of Indian Railway's freight traffic is contributed by eight major commodities, viz.

- Coal,
- Fertilizer,
- Cement,
- Petroleum products,

- Food grains,
- Finished steel,
- Iron ore and
- Raw material to steel plants.
- These constitute the core section of the Indian economy. Balance 10 per cent constitutes 'other' commodities moving in bulk and in containers. There has been steady increase in freight traffic during the last two decades both in terms of tonnes originating and earnings derived from freight traffic as can be seen from the following table:-

	1980-81	1990-91	1995-96	1999-00
Tonnes carried	1959	3184	3907	4564
Earnings	1551	8247	14973	21755



\*\*\* [Tonnes in Lakhs and earnings in crores of Rs.]

• From the above graph it is also seen that in comparison of "Tonnes carried" the earnings were increased much more, which is a cause and effect of increase in per quintal rate of different commodities besides higher classification of the same commodity and average lead per ton.

• To handle the day to day activities of the Commercial branch, different Manuals and Rules have been published by the Indian Railways. A brief view of such books is placed below:

• Commercial Manual Volume – I, mainly deals with the basic rules relating to Passenger tickets,

Warrants, Concessions Orders, High official requisition, Free Pass, Check and Collection of Passenger Tickets, Reservation of Berths, Seat, Booking of Special Train, Initial Accounts and Returns for Passenger Traffic, Booking and Delivery of Passenger Luggage, Booking and Delivery of Parcel Traffic etc.

• Commercial Manual Volume – II, deals with the basic rules regarding Issue of invoices, Indents for Wagon and Wagon Registration, Booking of material from Siding, Initial Accounts and Returns for Goods Traffic.

- Commercial Tariff.
- Indian Railway Conference Association (IRCA) Coaching Tariff Pt. –I, Vol. I, 25 \* containing the General Rules, Rates and the Conditions for the conveyance of Passengers and tariffs etc.
- IRCA Coaching Tariff No 25, Pt. –I, Vol. II containing Circumstances under which different Railway concessions are admissible and the competent authority to sanction the same.
- IRCA Coaching Tariff No. 25 Pt.- I, Vol- III containing Rules and Regulations and Conditions applicable for Booking of Parcel Traffic.
- IRCA Coaching Tariff No. 25 , Part- II containing passenger fares tables.
- IRCA Coaching Tariff No. 25, Part- III containing rates for Parcel and Luggage.
- IRCA Goods Tariff No. 41 , Pt. –I, Vol. I, containing General Rules for Acceptance, Carriage & Delivery of Goods etc.
- IRCA Goods Tariff No 43, Pt. – I, Vol. I, containing General Rules, Classification of Goods, Minimum Chargeable weight etc.
- IRCA Goods Tariff No. 43 Pt. – II, containing Freight Rates Tables for 1 km. to 5000 km.

### First Session – Covers the following:

- Organisation and Functions of Commercial Department
- Accounting of Commercial Department.
- Classification of Earnings.
- Accounts Office Balance Sheet and Traffic Book.
- Mechanisation of Traffic Accounts Procedure.

### Organisation of the Commercial Department

- The Head of the Commercial Department is the Chief Commercial Manager who is responsible to the General Manager for the Commercial policy and efficient working of the Commercial business of the Railway.

### Functions of the Commercial Departments

- The Commercial Department is responsible
  - for the sale of transportation services generated by a railway both passenger and merchandise,
  - for creating and developing traffic for securing and maintaining friendly relations with the travelling and trading public and
  - for cultivating good public relations generally.
  - The fixing of rates, fares and other charges and ensuring correct collection, accountal and remittance of traffic revenue receipts are also other relevant functions.
- The Commercial Department is divided mainly into following branches:
  - Rates and Fares.
  - Passenger Reservation
  - Ticket Checking
  - Catering and Vending
  - Public Relations and Publicity
  - Claims for Refunds and Compensation
  - Commercial Statistics
  - Marketing and Sales
  - Traffic Survey
  - Research and Development
  - Prevention of Claims.
- Each Department is monitored closely by a Commercial Manager working under one Chief Commercial Manager who is accountable to the Principal Chief Commercial Manager of the Railway. On an average three to four Chief Commercial Managers are assisting the Principal Chief Commercial Manager of a Zonal Railway.
  - The Zonal Railway Chief Commercial Manager (CCM) is assisted in discharging his functions through Chief Operations Manager (COM) who is responsible for running of passenger trains including parcel and luggage vans, making available of the wagon for carriage of merchandise of the trade.
  - To undertake constant liaison with various other departments such as Mechanical, Signal and Telecommunication (S&T) and other Engineering Wings of the Railways to keep the wheels running as per schedule.

\* Serial no 25 is variable (i.e. publication no) , in next publication it will be 26

- With the above daily activities of the Commercial Branch the revenue accrued therewith is being closely watched by the Traffic Accounts Department under the supervision of Financial Adviser and Chief Accounts Officer (FA&CAO)/Traffic of the Zonal Railway. At Head Quarters, Traffic Accounts office checks the returns from the station internally to ensure correctness of account of railway revenue accrued at each station. Besides, FA&CAO/Traffic possesses a group of Travelling Inspector of Accounts visiting the stations to ensure correctness of the initial records on the basis of which the station have submitted the monthly returns to Traffic Accounts (TA) Branch which have already been checked.

### **Accounting of the Commercial Department**

- The FA&CAO of Traffic Accounts wing is responsible for the check of all traffic earnings on either coaching or goods. His duty is to see that the rates and fares prescribed by the Railway Administration from time to time for various classes of goods traffic and passenger respectively are well within the maximum and minimum fixed by the Parliament. If owing to any reason the Railway is losing revenue or is being put to extra expenditure, it is the duty of the Deputy Financial Adviser and Chief Accounts Officer /TA on behalf of the FA&CAO (TA branch) to bring the matter to the notice of the CCM for corrective action. This accounting is also supplemented by checks exercised by the TIAs working under FA&CAO to see that there is no omission of accounting of Railway Revenues to Railway Books.

### **Category of Earnings**

- Earnings from coaching traffic include earning from Passengers, Luggage, Parcel, and Transport of post office mails. Similarly goods traffic includes earnings from Coal, Petroleum Oil Lubricant (POL), Container Traffic, Live-stock etc and from Sundry Earnings which includes Rents and Tolls, Catering and Sale Proceeds of damaged goods and grass, Advertisement, Diet charges etc.

### **Reality of Classification**

- To form an overall picture of the Railway Earnings and to get Managerial information, the earnings of Railways are classified under three

Sub-Major heads with a separate abstract for each such Major head viz.-

- Abstract X- Earnings from Coaching Traffic
- Abstract Y- Earnings from Goods Traffic
- Abstract Z- Sundry other earnings.
- The Sub-Major heads are divided into Minor, Sub and Detailed heads.
- It is not within the Competence of Railway Administration to introduce, abolish, change the nomenclature or re-arrange any of the Sub-major, Minor or Sub-heads. They may, however, introduce or abolish any of the Detailed heads under any of the Sub-heads.

- The various heads of Classification will be referred to by the numbers allotted to them prefixed by the letter of the abstract under which they occur. Thus the detailed head 'Season and Zonal ticket, other than suburban' will be referred to as "X-122 (X-one-two-two).

### **Accounts Office Balance Sheets**

- It is a Balance Sheet (corresponding to Bills Receivable Account in Commercial book keeping) prepared separately for coaching and goods traffic in the Traffic Accounts office for the purpose of taking the Carriage Bills into account and watching their realisations from the firms and departments. In addition, it incorporates into accounts the traffic cash received, otherwise than through the Station Balance Sheet (e.g., Advertisement fees, Sale of grass, Fares of coupons sold by Tourist Agents etc.)

### **Traffic Book**

- It is a compilation which collects and brings to account under the prescribed heads Coaching, Goods and Sundry other earnings, the whole of traffic earnings of a Railway, both local and foreign, whether accrued at stations or otherwise. It records the progress of realisation of these earnings, the results of apportionment of traffic interchanged with foreign Railways and deposit private companies, external agencies and the progress in the settlement of the balances on these accounts.

- The Traffic Book consists of four distinct parts viz.,

- Part' "A"- Station Accounts
- Part' "B"-Adjustment or Division sheets.
- Part' "C"- Ledger Account of the Home line.

- Part' "D"-Abstract of Earnings and Statement of Balance.
- **Part- A:** It consolidates the earnings of stations for the realisations of which the home Railway is responsible.
- **Part –B:** It deals with the results of apportionment of traffic interchanged with the other railways and Deposit Private Companies. In case of coaching traffic, figures are separately shown for passengers, luggage and parcels traffic while in the case of goods traffic only totals are shown.
- **Part- C:** It is the ledger account of the home Railway for traffic earnings the heads of account being –
  - Traffic Account – it serves the same purpose as "Demands Payable" does for expenses. It links the commercial accounts with the Government account, in detail it records the accrued Traffic Earnings in the month's accounts to which they pertain and watches the progress of their realisation. It provides figures for Journal Entry of Transfer.
  - Foreign Other Railway account, - it is the ledger account of Foreign Railways in the books of the Home Railway. It helps in the preparation of Account Current and Transfer Certificate.
  - Deposit Private Companies Account, It is the ledger account of Deposit Private Companies in the books of the Home Railway.
- **Part – D:** it consists of monthly journal entry for traffic earnings and is prepared from the figures of Traffic Book Part "C".

### **Mechanisation of Traffic Accounts Procedure**

- Preparation of "Incorrect Statements" in fares.
- Almost 100% reservations of berths and seats in passenger trains have been computerised. For such reservations computer printed tickets are issued.
- Each ticket is identified with a separate distinct unique number known as PNR (Passenger Name Record) generated by Computer.
- All the traffic booked 'To pay' during a month is accounted for promptly in the month's

account in which the traffic is received and delivered.

- Continuity of accountal of invoices is checked on computer and missing invoices are listed out in a statement to enable the Accounts to ensure receipt of all invoices and accountal thereof.
- Preparation of Machine Prepared Abstracts (MPAs)
- Preparation of Paid Statements.
- Simplification/Mechanisation of accountal has helped swift accounting vis-à-vis statistical reporting to management for proactive decision-making.
- The system of 'MPAs' has given rise to increase in Station Outstanding, due to issuance of memo invoices by a station in absence of original MPA and requiring special credit for its clearance from the original station where the traffic was booked.

### **Second Session–Covers the following:**

- Types of Tickets.
- Concession Orders.
- Concessions in Fares.
- Operational Procedures.
- Catering and Vending.

### **Passengers**

- For travelling on Railway, every person requires an authority to travel viz., Tickets, Pass etc. Tickets are of two kinds Card Tickets and Paper Tickets. Card Ticket is Printed Card Ticket and Paper Tickets include Blank Paper Tickets, Computer Printed Tickets and excess Fare Tickets. Certain other tickets viz., Soldier's Tickets and High Official Requisitions are also in operation. In addition, Season Tickets are also issued to commuters for suburban traffic.
- Printed Card Ticket (PCT)
- These are of various classes showing no of the ticket, type of the ticket, no. of persons allowed, names of stations (from & to), distance in Kms, class and fares.
- For children and other special classes of traffic on privilege and concessional cases, separate tickets are utilised.
- Presently tickets on microprocessor have also been introduced through SPTM or UTS.
- Blank Paper Tickets (BPT)



- While the printed card tickets of the desired station are not available with the concerned station, the station master may issue a blank paper ticket to authenticate a valid passenger. These are printed in three- fold: Passenger, Accounts and Records. These are printed for different value ranges upto Rs.100 and above Rs.100.

### **Concession Orders**

- A valid Concession Order authorises the booking clerk to issue tickets at admissible reduced fares in exchange of the concession.

### **Concessions in Fares**

- Ministry of Railways (Railway Board) allows concessions to various categories of passengers

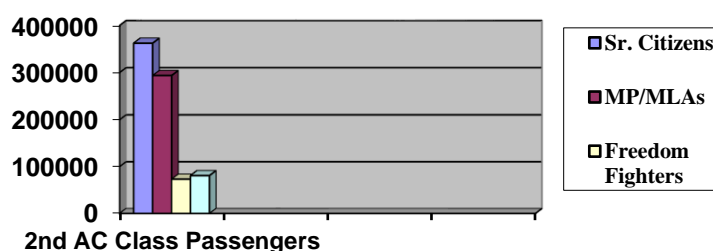
travelling on the Indian Railways. These concessions vary for different categories of person. There are approximately 169 different kinds of concessions code used in the PRS system of the Railways. Out of these, 31 are on account of duty and privilege passes of Railway Officers and employees, 29 are those which are given to Defence and Para-military forces, 32 given to handicapped and ailing persons, 12 for Members of Parliament, Members of State Legislative Assemblies and freedom fighters, 14 for artists and awardees of various categories, 4 for sport persons, 15 for educational purposes and 4 for medical purposes. In addition there are concessions given to senior citizens, farmers, war widows etc.

## Analysis of data at KOLKATA / Passenger Reservation System for the year 2003-04 (Source: MIS Report Chief Commercial Manager, Passenger Marketing)

- Out of total passengers of 344.43 Lakhs booked by Kolkata PRS, 1,10,99,330 number of passengers (excluding Railway & Defence personnel) availed various type of concessions during the year 2003-04.
- Out of Total passengers who availed concessions, Sr. Citizens (77,47,959) were the maximum with 69.81% followed by Students (9,12,046) 8.22%, Physically Handicapped persons (643038) 5.79% and MP's/MLA's (694815) 6.26%.
- The maximum number of concessions availed were in Sleeper Class (8169041) 73.60% followed by AC 3-Tier (1131897) i.e. 10.20% and AC 2-Tier (810411) 7.30%.
- The total earnings of Kolkata PRS during the year 2003-04 was Rs.1196.94 crore. The amount of concession given during the same period was Rs.84.21 crores excluding the defence personnel, MP's and MLA's for whom the reimbursement is given by the respective department.
- On an analysis of the passengers booked in different classes with the loss incurred it was observed that though the 2-tier AC passengers constituted only **7.30%** with reference to total passengers but the same consumed **34.85%** of the total loss. On the contrary Sleeper class passengers (**8169041**) were **73.60%** of the total passenger but consumed only **37.80%** of the total loss.
- A comparative analysis of the class wise percentage of passenger booked with class wise loss incurred by Kolkata / PRS is tabulated below for better appreciation.

Type of class	Concession Passenger	% W.R.T total concession passenger.	Loss incurred by railway	% of loss w.r.t total loss.
1 A	43589	0.39	22648168	2.69
2A	810411	7.30	293433632	34.85
F C	70355	0.63	2.9941504	3.56
3 A	1131897	10.20	157843467	18.74
C C	271536	2.45	13863828	1.65
S L	8169041	73.60	318314357	37.80
2 S	592498	5.34	6025148	0.72
<b>TOTAL</b>	<b>11099330</b>		<b>842070104</b>	

- Further analysis of the higher class (2nd AC) concession passengers revealed that though there are 169 different kinds of concessions given by railways, out of total passengers (810411) who availed concessions in 2<sup>nd</sup> AC Class only three categories consumed 90% of the total 2<sup>nd</sup> AC concession passengers i.e. Sr. Citizens (3,62,404) with 44.72% followed by MP, MLA (2,93,918) 36.27% and Freedom Fighters (**73,300**) **9.04%**. This is depicted below in a diagram:



**Railway Freight and Fare Committee (RFFC)** in their report had recommended for withdrawal / reduction in the quantum of certain concessions. The main recommendations that were to provide relief to Railway's exchequer are given below:

- Quantum of concession should not exceed 50 per cent.
- Maximum age limit for free travel of children should be reduced from the existing 5 years to 3 years.
- The 50 percent concession allowed to children between the age of 5 and 12 should be extended to children falling in the age group of 3 and 12 years. The quantum of concession should be reduced to 25 per cent if the child is provided a berth in reserved compartment and increased to 75 per cent if no berth is provided.
- Concession given to delegates of various organisations should be discontinued.

## Senior Citizen Concession

- 30% Concession is admissible on Unreserved as well as Reserved/RAC/Waitlisted tickets. The concessional fare shall continue to be calculated on the basis of fares for Mail/Express trains irrespective of type of train i.e., Mail/Express/or Passenger by which senior citizen travels. Besides, the concession is also admissible in prestigious and glamorous trains like Rajdhani & Shatabdi Express. As in the case of other concessions, this concession shall not be admissible on suburban tickets and also not applicable in season ticket fare.
- The Senior Citizens will be granted concessions in Rail fares irrespective of distance of travel. However, the distance restrictions otherwise applicable to general public for travel in each individual train will apply for issue of concessional ticket also. Circular Tour Ticket at concessional fare is also admissible for Senior Citizens when the total distance is more than 1000 Kms.
- Senior Citizens will have to carry documentary proof of age during travel and must produce the same to Railway Authority if demanded for verification. But it is not necessary at the time of purchase of ticket/booking.

## Platform Tickets

- To have an entry to a Railway Platform without purchasing a valid journey ticket, Platform tickets are issued and the earning realised from the sale are shown separately in Daily Trains Cash Book in the local passenger classification. This fare is equivalent to minimum ordinary fare.

## Soldier's Tickets

- This ticket is issued in exchange of a Military Warrant. These are printed in sets of three foils, one for passenger, second guard for luggage carried with guard and the third for record.

## High Officials Requisition (HOR)

- When High Officials of the Govt. who are entitled to reserved accommodation, travel over a railway, they furnish the Station Master of the starting stations with the requisition which contains a certificate by the officials stating that the accommodation has been duly supplied. The Station Master gives the official in turn a certificate to the effect that a voucher has been furnished for the accommodation provided. The certificate takes the place of a ticket and should

be collected at destination. The requisition obtained from the official is sent to the accounts office alongwith the Daily Cash Remittance Note for raising bill for recovery.

## Privilege Ticket Orders (PTOs)

- Tickets are issued in exchange of the PTOs for Railway officials and the PTO is sent alongwith the classification return as an authority for charging reduced rates.

## Emergent Police Passes

- Requisition for these passes will be made by a responsible police official who will be asked to enter in the back of each Pass the name and constabulary Nos. of police men and certify that the journey is being made for Railway duty.

## Excess Fare Ticket

- In all cases of recovery of excess fares whether made by a ticket collector posted at station or by travelling ticket examiners an excess fare ticket is issued. One foil is attached to the excess fare return submitted to the Accounts Office.

## Computerised Printed Ticket (CPT)

- Over 90% of reservation of berths and seats in passenger trains have been computerised and for such reservations computerised printed tickets (CPTs) are issued. These tickets are issued from a single paper roll with individual tickets machine numbered serially. A parallel number is generated by the computer and printed on the ticket. The tickets for all classes and destinations are printed from a single paper roll of a particular terminal. The main computer can handle several terminals simultaneously. Therefore no separate series for each class and destination are used. Paper rolls put on use on different terminals at distinct serial nos. Each ticket is further identified with a separate distinct no. called as **PNR No** generated by the computer.
- The computer summarises the daily collection for each reservation centre. Non-issued and cancelled tickets Statements, Statement of concession orders are also generated. The computer also prints a Monthly Statement summarising a class of ticket to different stations which serves the purpose of passenger classification.
- The software used in the Passenger Reservation System [PRS] is known as CONCERT [Country-wide net-work of Enhanced

Reservation and Ticketing]. The operational system of the CONCERT is as follows:

### **Operational Procedure:**

- CONCERT provides for various accounting and MIS reports in 3 different levels viz. Daily, Periodical and Monthly.
- The ACCOUNTING / MIS reports offered by CONCERT are as follows:

### **Daily Reports**

- Daily summary of Gross Earnings
- Statement of Reservation Fee and other charges
- Statement of Gross Earnings (Gauge & Class Wise)
- Daily summary of Gross Earnings - PRS site wise
- Daily Summary of Transactions (Cash Information)
- Daily summary of Transactions (Passenger & Ticket Information)
- Daily statement of Cash Vouchers
- Summary of Concession Vouchers (with Supporting Vouchers)
- Summary of Concession Vouchers (without Supporting Vouchers)
- Daily statement of CST tickets
- Daily statement of Modification / Student / Special Canc. Tickets
- Daily statement of Non Issued Tickets
- Statement of supervisory refunds
- Daily statement of Cancelled Tickets
- Daily statement of bank card tickets
- Bank card cancellations.
- Bank Modification Statement.
- Daily statement of Tickets issued on RTC
- Ticket Roll Continuity statement
- Voucher Register
- Bill Register
- Linking Statement of Vouchers
- Statement of mela charges
- Statement of Farakka Barrage charges
- Daily summary of Passenger Classification System
- Daily summary of Passenger Classification
- Detailed Passenger Classification for the System
- Detailed Passenger Classification Booking location wise
- Detailed Passenger Classification Accounting location wise

- Daily statement of PNRs generated PRS site wise

### **Daily MIS Reports**

- Login and Logout timings of each operator
- Hour Railway Summary of Transactions done by each operator (normal hour)
- Hour Railway Summary of Transactions before 08.00 hrs.
- Hour Railway Summary of Transactions after 20.00 hrs.
- Statement of Setting/Resetting of Train Status
- Statement of Change of Name/Age/Sex
- Statement of Release of Accommodation.
- Statement of Setting/Resetting of Lost Ticket.
- Statement of Change of Boarding Point.
- Statement of Lost Tickets.
- Statement of setting of Coach Damage status.
- First Transaction Report.
- Status Report - Location wise summary of terminals/earnings/refunds.
- Daily statement of Concession Vouchers.
- MIS figures showing no of operators in Delhi & IRCA with slips handled in different ranges.
- Train-wise and Class wise cancellations statement
- Operator-wise summary of transactions list

### **Periodical Reports**

- Periodic summary of Gross Earnings
- Periodic statement of Reservation fee and other charges
- Periodic statement of Gross Earnings (Gauge & Class Wise)
- Periodic statement of Gross Earnings (Local and Foreign)
- Periodic summary of transactions (Cash Information)
- Periodic summary of transactions (Cash & Passenger Information)
- Periodic summary of transactions (Cash Information) showing day wise totals for the system and New Delhi Accounting location

### **Monthly Reports**

- Monthly summary of Gross Earnings
- Monthly statement of Reservation fee and other charges

- Monthly statement of Gross Earnings (Gauge & Class Wise)
- Monthly summary of Gross Earnings (Local & Foreign)
- Monthly summary of transactions (Cash Information)
- Monthly summary of transactions (Cash Information) showing day wise totals for the system, accounting location and all booking locations.
- Monthly summary of transactions (Cash & Passenger Information)
- Monthly summary of transactions (Psgn & Ticket Information)
- Monthly statement of Cash Vouchers
- Summary of Concession Vouchers (with Supporting Vouchers)
- Summary of Concession Vouchers (without Supporting Vouchers)
- Monthly statement of CST tickets
- Monthly statement of Modification/Student/Special Canc. Tickets
- Monthly statement of Non Issued Tickets
- Monthly statement of Cancelled Tickets
- Monthly statement of Tickets issued on RTC
- Monthly Ticket Roll Continuity statement
- Monthly Voucher Register
- Monthly Bill Register
- Monthly Linking Statement of Vouchers
- Monthly statement of mela charges
- Monthly statement of Farakka Barrage charges
- Monthly statement of HOR concessions
- Monthly statement of POLICE concessions
- Monthly statement of Freedom Fighter concessions

### Monthly MIS Reports

- Peak Volume Report - Location wise info. on max passengers dealt
- MIS on concessions report
- MIS report for all Shatabdi Trains

### Accounting reports generation involves 2 main processes.

- Extraction of the data for the day.
- Generation of the reports.

#### I. Extraction of Data

- Everyday, CONCERT system will be shut down in the evening/night by the maintenance team. During this shut down, data will be extracted automatically. The data files will be

generated in the directory DK\$ACCNT:[DATAFILES].

- Everyday, all the accounting data used for generation of reports will be extracted into 22 different data files. This is done only once during the shutdown of the CONCERT system in the evening/night and this will be done at the main PRS site (@ IRCA DELHI, @ NKG Building CAL, @ SC, @ BBVT, @ MMC MAS)
- Extraction can also be done separately if required. But for a day, only once extraction will be done.

#### II. Generation of Reports

- Once extraction is done and all the 22 data files are created, reports will be generated. All the reports for all the Booking locations, Accounting locations and for the system will be generated and this will be done at the main PRS site (@ IRCA DELHI, @ NKG Building CAL, @ SC, @ BBVT, @ MMC MAS). Once these reports are generated, they can be printed at various booking locations.

#### Self Printing Ticketing Machine (SPTM)

- This apart, Self Printed unreserved tickets are also issued to the passengers for local and foreign journeys from a machine known as SPTM. If the passenger desires, a return journey ticket can also be issued for a validity of 24 hours from the time of issue of tickets. The data from SPTM are transmitted generally at odd hours to a computer to enable that computer to prepare passenger classification and write the DTCs Book

#### Coaching Passenger:

#### Realisation of Metro Railway Fare

- Metro Railway is realising fares for 3 Zones divided according to distance on the following one ride basis:

- Zone - 1 Ride - Rs.4.00
- Zone - 1 Ride - Rs.6.00
- Zone - 1 Ride - Rs.8.00

- In addition, they are issuing concessional ticket for 1 Zone- 48 Rides at Rs.120.00 instead Of Rs.144.00 and the like.

#### Parcel Way Bills (PWB)

- Consignments tendered for carriage by passenger trains are booked under the head Parcel / Luggage. For these a Parcel Way-Bill (P.W.Bill) separately for local and foreign traffic are being issued. Different colour waybills are

used for both local and foreign traffic. The charges are all on a Prepaid basis irrespective of chargeable distance, however, earlier to 1993 it was on compulsory Prepaid basis up to a chargeable distance of 500 km only and beyond 500 km it may be Paid or To-Pay basis.

- The rate structure for booking of parcels and luggage traffic has been rationalized during 2003-04 by replacing the Commodity-based rate structure with Service- based rate structure.
- Under the Service-based rationalized rate structure for parcels, all types of commodities, including luggage are charged uniformly at same rates, under 4 different Scales depending on the type of service as given below:-
  - Scale – R, for Rajdhani service by Rajdhani Express trains.
  - Scale – P, for Premier service , by notified well patronized Mail / Express and Shatabdi Express trains;
  - Scale – S, for standard service, by other Mail / Express trains, Shatabdi Express trains and Parcel Express trains ; and
  - Scale – E, for Economy Service, by Ordinary passenger trains.
  - Newspaper and Magazines are charged at same rates, under the lowest Scale – E by all trains.

### **Induction of Refrigerated parcel Vans**

- For maintaining the freshness of fruits and vegetables carried through railway system ten (10) Refrigerated Parcel Van have been manufactured by RCF – Kapurthala and put into service in the year 2003-04.

### **Percentage Charge on Value (PARCEL)**

- In case of Scooter, Motor Cycle, percentage charge on the actual value declared has been made compulsory. This charge is levied compulsorily as per the rates fixed by the Railway Administration for fragile goods. "Excepted Articles" are charged separately in addition to the parcel rates.

### **Coaching Postal Traffic**

- Postal mail is carried either in vehicles specially constructed as Postal Vans at the cost of Postal Department ; or in ordinary Coaching vehicles i.e. non-postal vehicles in which accommodation is reserved for conveyance of mail. Billing is periodically done by the Traffic

Accounts Department, to the Postal Department for such carriage. The liability of the Railway in regard to loss or damage to mail-bags etc. is the same as in the case of ordinary parcels.

### **Passenger Classification**

- This is a monthly return submitted by a station to its Accounts office accounting for all kinds of tickets sold by the station during the month concerned as well as the amount collected. It is posted from the summary of Daily trains Cash-cum-Summary Book as prepared separately for local and foreign (through) traffic. The total amount is taken to debit in the Balance Sheets.
- AUTHORISATION TO TRAVEL BY RAILWAYS OF MP'S (MP'S COUPONS)
- Identity Card cum Passes are issued by the Lok Sabha/Rajya Sabha Secretariat to the MPS and their spouses for journeys over all Indian Railway in higher classes. On completion of their journeys, they fill up a form showing particulars of journeys and hand it over to the Ticket Collectors on duty at destination stations along with the ticket. These forms (Appendix V/A) are entered in a statement and sent to Traffic A/Cs Office in a separate cover. These are then paid by the Parliament Secretariat through the Director General of Audit(Central Revenues) after billing by Traffic A/Cs. Office. The TCs should politely insist on this form being handed over.

### **Luggage Ticket**

- This is issued to a passenger when he is having ticket. The charges are prepaid and shown on the luggage ticket. Each passenger ticket is stamped with the letter "LB " to prevent its being used more than once for free allowance.

### **Left Luggage Ticket –Cloak Room**

- This is issued for luggage tendered by passenger for temporary custody at stations. When delivery is claimed, the ticket is collected from the owner who is asked to sign an acknowledgement and to note the date & time for removal of luggage for the space provided for. If the luggage is not claimed with in a month from the date of their deposit, they will be sent to the L.P.O. as unclaimed package.

## Classifications of Various Coachings Traffic

- The classification of various coaching traffic has been clarified in the earlier module (Module-1-General).

### Fares/Parcel Rates

- Rates coaching Branch at the Hd. Qrs. Level deal with the fares & rates for coaching traffic as prescribed by IRCA from time to time. These rates with maximum and minimum relate to passengers, luggage, Parcels live stock, tourist cars & saloons etc.
- No alteration in the General Classification can be made without the sanction of the Railway Board. The General classification of goods is described later on.

### Association of FA & CAO in all proposals involving changes in rates

- No changes are to be effected except in consultation with FA&CAO.
- In cases where FA&CAO is not in agreement with the CCM the latter will again review the case on receipt of FA&CAOs views and then decide whether to abandon, amend or adhere to the originals proposal.
- On receipt of further proposal of CCM, if the FA&CAO is still not in agreement with the CCM, he must submit the case to the General Manager informing the CCM accordingly without delay. The CCM in that case must await the final orders of the GM in the matter.

### Coaching Traffic

#### Railway Rates Tribunal (RRT)

- The constitution, functions & powers of the RRT are detailed in Chapter IV of the Indian Railways Act, 1890.
- Care should be exercised in preparing cases coming up before the Tribunal and CCM should personally take interest to in all such cases and the Railway Board should be informed.
- Eminent Lawyers like Advocate General of the State should be engaged to safeguard the interest of the Railways when there is heavy financial impact.

### Catering & Vending Catering

- There are two types of Catering in the Railways namely departmental & private.

- The departmental catering functions under CCM with one CCM/Catering exclusively in the Hd.Qrs.

- Various types of initial records are maintained by the unit Managers at various stations. These managers regularly submit their sales & purchase returns to the Hd. Qrs. For accountal. The Unit managers authorised by CCM/Catering, retain some of the Catering earnings for bazaar purchases for serving meals to the passengers as per requisition.

- The Railway Administration should submit quarterly P/Loss statement to Railway. Board. and the yearly P/L A/C is prepared by the G.M. for submission to the Railway Board through audit. This P/L A/C is certified by Audit.

### Private catering

- The present day scenario is of switching over to privatisation of these Catering services from departmental services. This is being actively thought of in view of the losses run by most of the Catering wings and in this eventuality a contract is being executed between the private caterers and the Railways. In some of the zonal Railways these private caterers are functioning satisfactorily.

### Vending services

- In the Railway refreshment room contracts including the vending contracts are executed where there is influx of passengers. In the matter of selection of such contractors proper safeguards like license fee, rent, recovery of water & electricity charges, security deposits, prohibition of sub-letting etc. are taken.

- So far as private catering is concerned the responsibility lies with an autonomous body called Indian Railway Catering Corporation. At present most of the important platforms and prestigious trains are under the control of IRCTC

- There is ban on certain articles in these contracts- 1) the sale of beef, ham & pork ; 2) sale of alcoholic drinks etc including Pan and Cigarettes/Bidi.

### Sale of Newspaper, Magazines etc.

- Sale is prohibited on Railway platforms or at any Railway station without the previous sanction of the Railway Administration in writing.

- Contracts are awarded by inviting applications and not by calling tenders.

- The Railway Administration should have a specific clause in their agreement in regard to the conditions of sale
- Sale of obscene books, pictures & publications is strictly banned.
- A suitable license fee should be recovered from the contractor.
- The period of contract with a bookstall contractor should not exceed 5 years at a time.
- Sale of books of regional languages should be encouraged.

### **Ticket Checking**

- Ticket checking is done in two ways:
  - by Ticket Collectors at the originating & destination stations and
  - by Travelling Ticket Examiners while the train is moving
- A System exists in the Railways to “nip with different kinds of nippers - Gate Nippers, Checking Nippers and Cancelling Nippers”. After collecting the tickets at the destination from the passenger during exit, tickets are cancelled. Tickets found missing if any, find place in the statement of ticket collecting stations sent by destination stations. The system should be a full-fledged system to minimise the percentage of missing collected tickets.
- TTE checks tickets to ensure whether the passengers are traveling with the proper tickets. Undercharges, if any, are collected by them and passengers traveling with improper tickets are charged with the excess fare and penalties, as the case may be.

### **Undercharges relating to Coaching Traffic**

- Undercharges are charges which do not conform to the appropriate tariff rates. The same is arising from failure to recover minimum freight, fares etc. The undercharges coming to the notice should be debited against the station.
- Undercharges on paid parcel/consignments, luggage should also be debited to the destination Station Master balance sheets before delivery.

### **Stock of Tickets & Other Money Value Books**

#### **Tickets Indents**

- The indents are prepared quarterly/half-yearly by the Stations and sent to CAO/TS who

after passing the same sends the same to Supt./Printing Dept. of the Railways.

### **Stock**

- On receipt of tickets the same is taken to stock after ensuring the correctness of progressive number.
- The particulars of all cards and season tickets received should be posted separately for each kind of ticket in the Stock Book (Form Com/T.22.)
- Similarly the particulars of money value books, including BPTS should be entered in the Stock Book for money value Books; (Form Com/T-23) each being posted individually in consecutive series. The date of completion of money value books including BPTS, should also be posted against relevant entries in the Stock Book as soon as the book is completely used up.
- Stock Books should be posted as soon as the tickets/money value books supplied have been counted and examined and before the supply advice is returned. The index to Stock Books should be kept up-to-date to facilitate easy reference & check.
- Custody, cleanliness of the ticket cases and tubes rests with the Station Master/Booking clerk.
- On relief, stock of the tickets are to be checked by the SM/Booking Supervisor to ensure accuracy.

### **City Booking Offices**

- It is a booking office situated in the city or town so as to facilitate the booking of traffic to and from the city or town.
- May be worked departmentally or through contractors.
- An agreement is to be executed showing the terms & conditions, if operated through a contractor.
- Contract should be usually limited to 3 to 5 years with a clause for termination in the event of unsatisfactory service.
- To safeguard the interest of the Railways a City Booking Office should be provided by the Railways Administration with adequate security, for the satisfactory performance of the contract and to cover the monthly outstandings.
- Full particulars of City Booking Offices should be published by each Railway Administration.



There should be a specific mention of serving station.

### **Accountal of Coaching Earnings-Passenger and Other Coaching Traffic Cash Book Daily Trains Cash Cum Summary Book (DTCS/BOOK)**

- It is a complete record of all coaching earnings for each day. All tickets whether card or paper are paid for at the time of issue, either in cash or in vouchers, such as warrants or partly in cash or partly in vouchers. The record of this issues and the amounts received for them, as well as for other items of coaching traffic for which the Station Master is accountable (except at station where separate cash book is maintained for parcels, luggage, motor cars, animals etc. traffic demurrage and wharfage) are made in the Daily Trains Cash Cum summary Books.
- At the end of the month the figures for the three ten day periods (10-day period each,) are consolidated on a separates sheet of the DTC Book by suitably altering the heading on that sheet. The figures in the monthly Summary Sheet will form the basis for the compilation of monthly returns and for preparation of Station Balance Sheet for submission to Traffic Accounts Office.

### **Initial Records>Returns/Misc. of Coaching Traffic**

- The initial records/returns/Misc. maintained in a Railway Station are as under and these are to be checked by TIAs and field audit parties during inspection of stations:
  - Verification of cash immediately on arrival at a station & the arrangement for its safe custody.
  - Arrangement of tickets in the tubes and check of fares and closing no. of tickets with those shown on the tube and the summary of DTCs.
  - Check of blank season tickets register, paper tickets including BPTs.
  - Check of DTCs book and Cash Remittance Notes
  - Guard's Signature Book for Cash Books.
  - Check of outstanding parcels & goods with the Delivery Books, Tally Books, Vehicle

Register, Register of unconnected consignments and Gate Pass Books.

- Parcel Cash Books
- Recovery of Wharfage and Demurrage Charges Returns
- Accountal of Error Sheets
- System of re-weighment of inward parcels and the accuracy of weighing machines & weighbridges.
- Check of List of Station Outstandings
- Regularity in preparation in the Test Balance Sheets
- Handling Bills
- Unaccounted for Way Bills
- Excess Fare Books
- Witnessing of collection of tickets and check of collected tickets
- The Accounts Officer of CAO(TA) will carry out original check of some of the initial records kept at stations like passenger classifications.

### **Concessions**

- Various tickets issued against concessions i.e. reduced fares than the appropriate & correct fares.
- Concession orders issued by various authorities competent to issue the orders
- Concession for Senior Citizens as described earlier.

### **Passenger Amenities**

- Retiring Rooms are made available by the Railways on production of tickets at a prescribed rate per 24/12 hours from the time of booking at the stations where these facilities exist.

### **Passenger Amenities Satellite Based Telephone Service in Howrah-New Delhi Rajdhani Express**

- After the successful trial of mobile telephone installed in the Pantry Car of How-NDLs Rajdhani Express in collaboration with VSNL Ltd. the scheme was opened commercially in the said train on 29.05.97. Following procedure was laid down for operation of Immarsat Voice System (IVS).
  - IVS will be put through from 19.00 hrs to 22.00 hrs and from 7.00 hrs to 9.00 hrs on the following day ex- Howrah to New Delhi. From 19.00 hrs. to 22.00 hrs. and from 7.00 hrs. to 9.00 hrs. on the following day ex-New Delhi to Howrah.

○ In the event of Rajdhani Express running late IVS would start two hours after departure ex Howrah or ex New Delhi but would be available upto 22.00 hrs only in the midnight. Similarly, IVS would continue from 7.00 hrs upto 1 hour before (late) arrival at New Delhi or Howrah.

○ Voice Call Charges (VCC) will be collected by the Steward from the passengers at the prescribed rates laid down. At present the rate is Rs.2.10 per second in India and Rs.2.70 per second outside India.

○ IVS is in vogue in other Rajdhani Expresses as well.

### Bank Lodgments (B.L.)

• In case where station cash is not remitted through guards Cash Chest of the nominated trains there exists an arrangements for remittance of station earnings to the nominated nationalised bank daily by the Station Master or the Guards of a particular train after obtaining acquittance from the Banks. This system is working satisfactorily.

### Coaching Balance Sheets (CBS)

• The Coaching Balance Sheet is the personal Account of the Station Master. On the debit side are shown all classified earnings of the Railways and on the credit side all remittances either through 'Cash' or Vouchers are shown.

• Chart showing various items appearing in the Coaching Balance Sheet ( Drs., Crs., spl. Crs. & closing balance ) and the items of CBS with returns or Accounts documents in juxtaposition is attached. Items are already described in the earlier modules and auditing checks are described in the subsequent modules.

• Remittances of cash & vouchers are described in the 'Credits' column of the CBS.

• The balance represents the unrealised earnings at the close of the month for the collection of which the Station Master is responsible and this forms the first liability in the Balance Sheet of the following month.

### COACHING BALANCE SHEET

#### DEBITS

Items in the Balance Sheet	Returns or Accounts documents with which checked
1. Opening Balance .. ..	1. Closing balance for the previous month.
2. Local Passengers Ordinary-Printed tickets	2. Machine tabulation of total fares for Local traffic (Paragraph 2119)
3. Local Blank Paper tickets including Platform tickets, excess in booking etc., etc.	3. Returns of Local Blank Paper tickets (Appendix VII/C-CM).
4. Local Excess Fares ...	4. Local Excess Fare return (COM/R.19 Revised)
5. Local Luggage	5. Return of Local Luggage (COM/L.26 Revised)
6. Local animals & birds etc.	6. Return of Local animals & birds etc. (COM/L.24 Revised)
7. Local Government passengers, baggage etc.	7. Return of Local Govt. passengers, baggage etc (COM/P.21 Revised).
8. Local parcels outwards 'Paid'	8. Local outwards paid parcels Cash Book (COM/C.4-A)
9. Local parcels inwards 'To Pay'	9. Local parcels inwards 'To Pay' summaries (COM/P.8 and 9 Revised)
10. Local motor-cars, carriages and boats etc. outwards 'Paid'	10. Local outwards motor-cars, carriages and boats etc. summaries.
11. Local motor-cars, carriages and boats etc. inwards 'To Pay'	11. Local inwards motor-cars, carriages and boats etc. summaries.
12. Through Passengers Ordinary-printed tickets.	12. Machine tabulation of total fares for Through traffic (Paragraph 2119)
13. Through Blank Paper tickets	13. Return of Through Blank Paper tickets (Appendix VII/C-CM)
14. Through Excess Fares	14. Through Excess Fare Return (COM/R.19 Revised)

<b>DEBITS-concl'd.</b>	
Items in the Balance Sheet	Returns or Account documents with which checked
15. Through luggage	15. Return of Through luggage (COM/L.29 Revised)
16. Through animals and birds etc.	16. Return of Through animals and birds etc. (COM/L.27 and 28 Revised).
17. Through Government passengers, baggage etc.	17. Return of Through Government passengers, baggage etc. (COM/P.22 Revised)
18. Through parcels outwards 'Paid'	18. Through outwards paid parcels Cash Book (COM/C.4B)
19. Through parcels inwards 'To Pay'.	19. Through parcels inwards 'To Pay' summaries (COM/P.8 and 9 revised)
20. Through motor cars, carriages and boats etc. outwards paid	20. Through inward motor cars, carriages and boats etc. summaries
21. Through motor cars, carriages and boats etc. inwards 'To Pay'	21. Through motor cars, carriages and boats etc. summaries
22. Left luggage, demurrage and wharfage	22. Left luggage, demurrage and wharfage return (COM/D.16 Revised)
23. Sundries	23. Cash transmit notes of miscellaneous receipts (COM/C.11 Revised)
24. Telegraph	24. Statement of Telegraph transaction (LT.6-1)
25. Terminal tax	25. Statement of Terminal tax (COM/T.5 Revised)
26. Error sheets and Disallowance's	26. Register of Error sheets issued and list of errors.
<b>CREDITS</b>	
<b>1. Cash</b>	1. Cash Remittance Notes (COM/C.9 Revised) as consolidated in the Cash register (A.2722)
<b>2. Vouchers</b>	2. Original vouchers as consolidated in the Vouchers Register (A.2728).
<b>3. Special credits-</b> (a) Overcharge sheets (b) (c) Re-booking (d) (e) Credits authorised by the Accounts Office (f) Refunds allowed at the time of delivery of Parcels. (g) Freight, demurrage, wharfage, or storage charges on consignments transferred to Lost Property Office (h) Way-Bills twice accounted for (i) Special recoveries	3. Special credits- (a) checked Overcharge Sheets (COM/O.7 Revised). (b) Inwards 'To Pay' Parcels Abstracts and Summaries. (c) Credit Advice Notes (A.2811). (d) Checked lists of Refunds (COM/R.12 Revised). .. (e) Lost property Office Statement (Appendix XXII/A-CM). (f) Inwards 'To Pay' abstracts and summaries in the case of inwards 'To Pay Traffic' parcel Cash Book in the case of outwards 'Paid' traffic. (g) Statement of recoveries (COM/R.11 Revised).
4. Closing balance	1. Outstanding lists (COM/O.6 Revised).

## Demurrage Charges

- The Demurrage charges are levied by the Railway Administration for detention of rolling stock by the consignors/consignees beyond the prescribed free time allowed for loading/unloading. Wagons are deemed to have been placed in the siding when the same are placed at the specific point of interchange of wagons fixed between the siding owner and the Railway Administration. The siding owner should also be informed in writing that the wagons had been so placed. Thus, free time allowed for loading/unloading should be calculated for levy of demurrage charges from the time the wagons are placed in the siding at the specific point of interchange.
- As per Railway Boards instructions (April 1977), whenever Railways were called upon to render additional services by way of placement of wagons in a siding, instead of regular goods shed, separate placement charges were to be recovered from the parties in addition to normal freight charges. Further, clause 2.8 of Memorandum of Guidelines between Indian Railways and CONCOR provides payment of a schedule of charge by CONCOR for pilot and shunting operations for any specific operational need.
- Rules provide that for performing shunting operations related to placement and removal of wagons in the private portion of sidings by electric engine, shunting charges are to be levied from the time the engine enters the private portion of the siding till its return. The orders also emphasize that the engine should not be detained for long.

## Audit of Earnings (Local Traffic) (Source: RAM-163)

Audit should verify-

- that the assessment of railway charges is correct according to the rules, that these amounts have been realised and that the money realised has been collected from the stations and other sources and remitted to the Treasury/Bank for credit to the railway revenues;
- that the system provides adequate checks and balances;
- that a suitable system of accounting and internal check is in force and the instructions

relating thereto have been laid down in a convenient form;

- that there is no fraud, leakage of revenue and other irregularities.

## Computerised System of Traffic Accounts

- The computerised system of accounting has been introduced on the railways for passenger traffic pertaining to Printed Card Tickets, Computer Printed Tickets (CPTS) and for Goods Traffic.

## Passenger Accounts

- The master file in the computer based system is the PALL CARDS TAPE which is initially created by feeding the existing information in the passenger classification directly into the system software converting the punched card to P BASIC TAPE.
- The PALL CARDS TAPE containing the fixed information such as class/time/distance/rate and codes for pilgrim tax/out agency and worked lines etc. is run with P BASIC TAPE on the computer for updating with reference to the transactions for the month and for checking the total amount of fares realised for each index no. of tickets.
- After checking in Traffic Accounts Branch for errors and omission in data entry, correction cards are punched and run through the computer with the incorrect tape and the final incorrect list is printed, which forms the basis for the Accounts Office for issue of error sheets to the stations in cases of under charges and over charges.
- The PALL CARDS TAPE is subjected to two important runs for verifying the veracity of information on the master file.
- The first of this runs prints the list of Passenger Master Records with the information opening number, rate class, distance, pilgrim/terminal tax code etc. for each index no. for each station.
- The second run attempts a scrutiny of a master file once in a six month or when there is change in passenger fare rate, by checking consistency between the rate, distance, type and class.
- For this purpose cards are Data entered from passenger fare table and after preliminary editing put on tape which is then run with the PALL CARDS TAPE for checking the fare.

- For differences in the rates as calculated through the computer and as given in the PALL CARDS TAPE a statement called 'Checking Passenger Fares' is printed to indicate the current passenger fare and the fare as per tape for each pair of stations.

### Goods Accounts

- Accounts foil of invoices receipt from stations according to a prescribed programme are checked in accounts office to find out missing invoices, if any, and for accuracy of classification, rates and other charges.
- The checked invoices, after codification, are Data entered and verified and tabulated to detect missing or duplicate invoices.
- The punched cards are then run on the computer to calculate and check freight.
- Whenever the station freight and calculated freight differ, an incorrect statement is prepared for check in the Accounts Office for detecting punching mistakes. The corrected data entries are recorded on a tape called the 'Goods Basic Tape'.

On the basis of Goods Basic Tape the following statements are prepared:

- **Statement incorrect invoices**— shows under charges and over charges separately for 'Paid' and 'To Pay' traffic and forms the basis for raising error sheets by Accounts Office against the stations and preparation of the least of voluntary refund of over charges.
- **Outward Abstract (MPAS)**— all the invoices issued to each station are grouped together at one place in this abstract. These are sent to the receiving stations for comparison with the delivery book posted from the destination foils of the invoices as the result of comparison entries are forced into the delivery book or linked into the outward abstract in respect of invoices appearing in one or the other but not in both these documents.
- **Paid Statement**— the shows invoice wise list of traffic booked each 'station from' weight handled by railway or owner etc. and is used for
  - ascertaining the station liability for outward 'paid' traffic and checking the same with station balance sheet;
  - checking-
    - continuity of machine numbers of 'paid' invoices,

- handling contractors bill
- **'Paid On Charges' Statement**—this is used for checking the special credit taken for re-booked consignments in the station balance sheet.

### Computerised Passenger Reservation System

The online computerised reservation system introduced on Indian Railway is called IMPRESS (Integrated Multi-train Passenger Reservation System). Under this, the following information is fed into the system:

- Master fare table,
- Various types of concessions/vouchers and rules regarding them identified with codes,
- Rules for rounding off,
- Rules for collection of other charges like reservation fees, sleeper charges etc.,
- Rules regarding cancellation, journey alteration etc.,
- Train details like Train No., accommodation available, allocation of seats/berths, station to which tickets can be issued, stoppages with timings, intermediate stations, distance between train originating stations and destination station.
- The following returns are generated by the system in regard to issue and accountal of computerised reservation tickets:
  - Daily Terminal Cash Summary Book,
  - Daily Statement of Transaction (Ticket Information),
  - Daily Statement of Transaction (Cash Information),
  - Daily Statement of Cancellation-Passenger (ROPD),
  - Daily Statement of Modification-Passenger,
  - Daily Statement of Non-issued Ticket-Passenger,
  - Daily Statement of Concession Vouchers,
- Monthly summaries of the following statements are also generated through computer at stations:
  - Monthly Summary of Transactions (Ticket Information),
  - Monthly Summary of Transaction (Cash Information),

- Passenger Classification Summary (including BPTs),
- Monthly Statement-Cancellation-Passenger Summary,
- Monthly Statement-Modification Summary,
- Monthly Statement-Non-issued Ticket Summary,
- Summary of Refunds for the month,
- Summary of non-issued and special cancellation statement,
- Statement of Credit Cards.

### **Audit of Computerised Accounts** (Source: RAM-167)

In order to ensure veracity of the data under the computerised system, the audit should exercise the following audit checks.

#### **Passenger accounting-**

- A listing of the passenger fares tape/rate master should be undertaken to see that the rates of fares are in accordance with the rates notified by the Rail Board;
- The statement "Checking Passenger Fares" should be examined to see that correction to PALL CARDS TAPE are made without delay and there has been no loss of revenue owing to under charges having remained undetected because of incorrect rates on PALL CARDS TAPE;

#### **Goods accounting-**

- Run to run totals prescribed for processing integrity are actually agreed;
- The total number of invoices as shown in the station forwarding memo for the selected stations agree with the number of cards in the card to tape programme and the grand total

number of cards in this programme agree with the total number of cards in the paid statement and the outward abstract programmes;

- The machine prepared statements 'continuity check of invoices' agree with the station memo of invoices and the Register of missing invoices in respect of the selected stations.

#### **Computerised Passenger Reservation System-**

- The correctness of the base fare incorporated in the Master Fare Table should be checked by obtaining of print out of Master Fare Table;
- Train-wise Fare-dump listing sent to accounts for vetting at the time of revision of tariff should be checked as to the correctness of fare as calculated by the system between pair of points;
- During station inspection the correctness of fare and other charges collected should be checked from DTC (Cash Information) statement generated on audit requisition for selected days and terminals;
- It should also be checked that the initial records are properly maintained and correct amounts due are collected in respect of concession, collection etc.
- The manually prepared Balance Sheet of the Computerised Passenger Reservation system stations received in Accounts is checked for the correctness of the system base fare, other charges etc., with reference to the monthly statements:

Debit Side	Statements generated for check
1. System Base fare-other charges	Passenger Classification Summary (including BPT) Foreign & Local
2. System other charges-Local & Foreign	Do
3. System Vouchers-Local & Foreign	Do
4. System CST (Govt. Passengers) Local & Foreign	Monthly Summary of Transactions (Cash information)
5. System-Cancellation Charges	Do
<b>Credit Side</b>	
1. Cash & Vouchers	Acknowledged Cash Remittance Notes (Manually)
2. System Cash Refund-Local & Foreign	Monthly Summary of Refunds, Modifications, Cancellation Statements
3. System Vouchers Refund-Local & Foreign	
4. System CST (Govt. Passengers) Local & Foreign	

- The errors noticed in the various statements, accounts etc. prepared on the computer should be carefully analysed to see whether these are due to wrong coding, punching etc. or defects in the programme;
- If any defect in the programme is suspected or if any control provided in the system has proved ineffective it must be realised that such errors would have affected all transactions of that type. Such cases should be taken up with the administration and simultaneously a detailed report furnished to the Deputy Comptroller and Auditor General. The comments of the administration, remedial action taken etc. should be advised to him;

### **Audit of Passenger classification** (Source: RAM-169)

- While selecting the series of printed card tickets into passenger classification, all 'out of series' issues in the preceding month should be selected for scrutiny as far as possible;
- It should be seen that 'out of series' issues in the current month are entered in the 'out of series' Register maintained by the Traffic Account Branch. This register should also be reviewed periodically with a view to verify that the incidence of 'out of series' issues are specially heavy on any particular station and that 'out of series' issues are accounted for promptly;
- The entries in the classification should be examined with reference to the index numbers of tickets supplied to the stations and the highest number of tickets collected as per Ticket Collector's Report;
- It should be seen that the amount of fare realised as per classification is agreed with the corresponding entry in the 'statement of station figures' and placed into Coaching Balance Sheet;
- It should be seen that the distance between a pair of stations, the pilgrim tax leviable and the fare chargeable are correct. The fare so checked should be agreed with the fare in the passenger classification;
- The errors noticed in the check of entries in the passenger classification should be traced into the incorrect list;
- The correctness of the action taken on the items in the statement 'List of passengers unmatched basic card' should be checked;

- The records of traffic accounts branch should be examined to see that the cases of under charges/over charges are promptly settled.

### **Audit of Pilgrim Tax Statement** (Source: RAM-171)

- The total of the statement of pilgrim taxes printed on the computer should be traced in the Register of pilgrim tax maintained by the Accounts Office;
- While checking the passenger classification all entries having pilgrim tax should be traced into the tax statement printed by the computer;
- The tracing of pilgrim tax should also be done in respect of all passenger classification of printed tickets which are accounted for manually by Accounts Office due to delay in their receipt.

### **Audit of 'Paid' Parcel Traffic** (Source: RAM-172)

- Outward 'paid' Parcel Way Bills (P.W.Bills) and 'Paid' Parcel Cash Books should be checked properly,
- The checked parcel way bills (account foils) of the stations selected for audit should be compared with the 'Cash Book' copy received in the Accounts Office from the forwarding station'
- 'Guard Foils' in respect of two selected destination stations (local & through) should also be compared with 'Cash Book' copy received from the forwarding station.

### **Audit check of invoices** (Source: RAM-173)

- The continuity of 'paid' invoices should be verified with reference to the register of paid invoice books supplied to the stations, while that for 'To Pay' invoices with the commencing and closing numbers given in the covering memo receipt from the stations;
- The first entry in the current month's paid statement (viz. month of accounts selected for audit) should be compared with the last entry in the previous month's paid statement;
- The continuity of invoices within the 'Paid Statement' compiled on the computer should also be checked;
- While all invoices selected for audit should be checked in regard to class, rate, other charges etc. calculation of freight (rate x weight) where done on computer and not manually, is to be checked to the extent prescribed in the secret memorandum;

- The audited invoices should be traced into the machine prepared abstract. During such tracing it should be seen that invoices marked for weighment enroute have been properly identified by an asterisk in the machine prepared abstract or alternatively have been included in the statement of invoices marked for weighment enroute;
- Tracing the audited invoices into the 'paid statement' and verification of debit taken into station balance sheet on account of outward paid traffic should be reinforced by checking of accuracy of the totals of the Paid statement both in respect of freight and weight handled by the owner;
- The credit on account of 'paid on charges' taken in the station balance sheet should be checked with reference to the machine prepared 'paid on charges statement' and the entries therein verified with the details of items relating to Paid on charges;
- For ensuring that the debit is forced correctly against the station to which the consignment is rebooked, selection of invoices for audit should include some rebooking invoices within the percentage prescribed and such invoices should be traced against the relevant destination station in the machine prepared outward abstract;

### **Audit check of Traffic Book and Accounts Office Balance Sheet (Source: RAM 178)**

- The reconciliation of the figures with those in the General books and the correctness of the amount shown under 'Cash in Transit' should be looked into. In the case of the Accounts Office Balance Sheet, a review should be conducted especially of items not coming otherwise under test audit, in order to see if claim is promptly and correctly made and adequate action is taken to keep unrealized earnings at a minimum.

### **Audit check of Refund List and over-charge sheets (Source: RAM 179)**

- Audit should check the possibilities of irregular payments and frauds;
- It should be seen that entries in regard to refunds are made in the abstracts or other suitable procedure exists in order to prevent the certification of duplicate claims.



# Illustrations I

(Based on Para 2.1.8 of Audit Report 2002)

## Northeast Frontier Railway: Loss due to irregular charging of Freight On Paid basis instead of To Pay basis

- Food grains in block rakes from Northern and North Eastern Railways were being booked to New Guwahati under the Centralised Booking Scheme till 30 September 1986. With effect from 1 October 1986, the Centralised Booking of foodgrains for stations in Assam and North Eastern Region is being operated through New Bongaigaon (NBQ). The Scheme envisages that Food Corporation of India (FCI) would book all consignments in block rakes to New Bongaigaon in the first instance. An officer of the FCI would intimate the Railway staff at NBQ 24 hours in advance the destination stations to which the incoming wagons were to be finally despatched (rebooked). The freight for rebooking would be calculated giving the benefit of through telescopic rates from the originating station to the ultimate destination.
- While intimating the modus operandi of the Scheme, the Railway Board had stipulated that the Scheme was to be in force upto 30 September 1988. Further extension of the Scheme was to be on the basis of an Appreciation Report on the working of the Scheme to be submitted by the Northeast Frontier Railway to the Board, well before the expiry of the sanction.
- Scrutiny of records revealed that the FCI rakes received at NBQ were diverted by the Railway Administration on the authority of monthly Dissipation Programme of Foodgrains received from FCI without routing through the CB Cell/ NBQ. The re-booking Railway Receipts (RRs), the Forwarding Notes (FNs) were prepared days after the foodgrains were actually unloaded at destinations. But the freight was charged irregularly on Paid basis instead of To Pay basis. Consequently, the Railway Administration failed to collect surcharge applicable on To Pay traffic.
- During the period September 1998 to March 2001, 209 lakh quintals of foodgrain moving in rake load from NBQ without routing through the CB Cell/ NBQ was charged on Paid basis, though the RRs were issued at later dates, after delays of 1 month to 22 months. Not charging these consignments on To Pay basis and failing to collect surcharge thereon has resulted in loss of Railway revenue of Rs.2.28 crore.
- It was also observed that in August 1997, the Railway Administration approached the Board for post facto approval for continuance of the Scheme from October 1994 to July 1997 and its extension for a further period from 1 August 1997 to 31 July 1998. In September 1997, the Board directed that for a proper examination of the proposal, concurrence and views of Associated Finance may be brought out. Though the Board directed the Railway Administration again in April 1999, no action has so far been taken by the Railway Administration (September 2001) in this regard.
- The scheme also envisaged that when the FCI surrendered the original RRs, they should be tallied and reconciled with rebooked RRs, to obviate the undercharges, if any, due from FCI. As on 29 April 1999, more than 5,000 RRs were pending reconciliation at rebooking points. Test-check of 63 cases of unloading at destination stations revealed that the FCI authorities did not issue forwarding notes in all these cases. Consequently, the Railway Administration could not realise freight amounting to Rs.0.03 crore.
- The matter was brought to the notice of Railway Administration and Railway Board in May 2001 and October 2001 respectively; reply has not been received (October 2001).

### Question:

1. What is the Centralised Booking Scheme and what was its validity while it was operated through New Bongaigaon (NBQ). What is the present state of this scheme?
2. Why Railway Audit pointed to an amount of loss of Railway revenue of Rs.2.28 crore during the period September 1998 to March 2001.
3. How this could be avoided by the Railway Administration?

## Illustration-II

(Based on Para 2.3.2 of Audit Report 2002)

### **Eastern Railway: Less charging of demurrage charges--*Incorrect computation of free time by the Railway Administration led to the loss of Rs.11.22 crore towards less charging of demurrage charges***

- Demurrage charges are levied by the Railway Administration for detention of rolling stock by the consignors/ consignees beyond the prescribed free time allowed for loading/ un-loading. Wagons are deemed to have been placed in the siding when the same are placed at the specific point of interchange of wagons fixed between the siding owner and the Railway Administration. The siding owner should also be informed in writing that the wagons had been so placed. Thus, free time allowed for loading/ un-loading should be calculated for levy of demurrage charges from the time the wagons are placed in the siding at the specific point of interchange.

#### **1. Food Corporation of India (FCI) siding at Dankuni**

- The above siding consists of 5 lines (viz., Line no. 1 to 5). Out of these, each of the lines viz.1 to 3 is used for receiving the inward loaded rakes and has the capacity to handle 42 wagons (8-wheeler). The remaining 2 lines (4 & 5) have capacity of only 14 wagons (8-wheeler) each and are used for unloading of wagons.
- It was noticed that inward loaded rakes consisting of 40 wagons (8-wheeler) were received directly at either of the Line no. 1 to 3 of the siding. However, only 28 wagons (14+14) were placed on Line no. 4 and 5 for unloading of the wagons due to inadequate capacity of the lines. After completion of unloading of the wagons placed on Line no. 4 and 5, the balance number of loaded wagons were placed for unloading on Line no. 4 and 5. Thus, there was delay in release of wagons within the prescribed free time allowed for unloading of a rake.
- It was, however, noticed that demurrage bills were preferred from the time at which the wagons were placed for unloading on lines No.4 and 5. Railway Administration had also allowed free time separately for each group of 14 wagons.
- Thus, incorrect computation of prescribed free time resulted in less charging of demurrage amounting to Rs.9.19 crore during the period April 1997 to October 2000.

#### **2. Philips Carbon Black Limited (PCBL) Siding, Durgapur**

- The above siding consists of 3 lines. Out of these, two lines with a capacity of 20 wagons (4 wheeler) on each line, are earmarked for unloading of wagons. The third line, known as Wall Line capable of accommodating a full rake, is utilised for placement of loaded or empty wagons as the case may be.
- As per practice in vogue, the full rake consignments were drawn to the PCBL siding. Thereafter, the wagons were placed at the two lines (earmarked for unloading) and the balance wagons on the Wall Line. After completion of unloading of the wagons placed on the two unloading lines, the balance number of loaded wagons available at Wall Line were placed on the two lines (earmarked for unloading) and the empty wagons taken to the Wall Line. Subsequently, after completion of unloading of a full rake, the empties are formed as a rake on the Wall Line. Thus, there was delay in release of wagon within the prescribed time allowed for unloading.
- It was, however, seen that the demurrage charges were levied separately for each lot of loaded wagons placed on each unloading line although the same were to be levied from the time of placement of a rake at the interchange point till its drawal out of the siding after allowing admissible free time. Incorrect computation of prescribed free time resulted in short realisation of demurrage charges to the tune of Rs.0.44 crore in this case during the period September 1996 to November 2000.

- The matter was brought to the notice of Railway Administration in March, 2001 in respect of the above two cases; reply has not been received (October 2001).

### **3. Food Corporation of India (FCI) siding, Dhanbad**

- Due to capacity constraints, one full rake consignment booked to the siding had to be placed in 3 trips. During the trips (1 to 3) the balance number of wagons were stabled in Dhanbad yard. This resulted in detention of wagons in the serving station yard. However, contrary to the provision in the agreement to allow free time only once, the Railway Administration, while levying demurrage charges for such detention, allowed free time for each trip. Thus, there was a short levy of demurrage charges to the tune of Rs.1.59 crore during the period from June 1998 to November 2000.
- The matter was brought to the notice of Railway Administration in April 2001 in respect of the case at Sl.No.3 above and Railway Board in September 2001 in respect of all the three cases; reply has not been received (October 2001).
- Due to incorrect computation of free time, Railway Administration suffered a loss of Rs.11.22 crore (Rs.9.19 crore + Rs.0.44 crore + Rs.1.59 crore) towards less charging of demurrage in the above mentioned cases. The irregular practice continues in all the 3 sidings.

#### **Question:**

1. What is the irregularity pointed out by audit in all the 3 cases?
2. State the amounts and the periods of calculation of undercharges in demurrage in all the above 3 cases.
3. Can any suggestion be thought out so that claim of demurrage charges may be reduced by the Railway Administration?

***Solution to the Illustration I:-***

- 1.** With effect from 1 October 1986, the Centralised Booking Scheme (CBS) of foodgrains for stations in Assam and North Eastern Region is being operated through New Bongaigaon (NBQ). The Scheme envisages that Food Corporation of India (FCI) would book all consignments in block rakes to New Bongaigaon in the first instance. An officer of the FCI would intimate the Railway staff at NBQ 24 hours in advance the destination stations to which the incoming wagons were to be finally despatched (rebooked). The freight for rebooking would be calculated giving the benefit of through telescopic rates from the originating station to the ultimate destination. While intimating the modus operandi of the Scheme, the Railway Board had stipulated that the Scheme was to be in force upto 30 September 1988. Further extension of the Scheme was to be on the basis of an Appreciation Report on the working of the Scheme to be submitted by the Northeast Frontier Railway to the Board, well before the expiry of the sanction. Thus CBS of foodgrains was in force from 1 October 1986 to 30 September 1988.
- 2.** Scrutiny of records revealed that the FCI rakes received at NBQ were diverted by the Railway Administration on the authority of monthly Dissipation Programme of Foodgrains received from FCI without routing through the CB Cell/ NBQ. The re-booking Railway Receipts (RRs), the Forwarding Notes (FNs) were prepared days after the foodgrains were actually unloaded at destinations. But the freight was charged irregularly on Paid basis instead of To Pay basis. Consequently, the Railway Administration failed to collect surcharge applicable on To Pay traffic. During the period September 1998 to March 2001, 209 lakh quintals of foodgrain moving in rake load from NBQ without routing through the CB Cell/ NBQ was charged on Paid basis, though the RRs were issued at later dates, after delays of 1 month to 22 months. Not charging these consignments on To Pay basis and failing to collect surcharge thereon has resulted in loss of Railway revenue of Rs.2.28 crore. Thus either due to non-observance of the rules of the scheme or/and due to expiry of the validity of the scheme Railway Administration had to suffer the aforesaid loss.
- 3.** As soon as the FCI rakes received at NBQ were diverted on the authority of monthly Dissipation Programme of Foodgrains received from FCI without routing through the CB Cell/ NBQ the consignment should have been allowed to be rebooked after issuing separate RRs charging these consignments on To Pay basis. Moreover, well before the expiry of the validity of the scheme on 30 September 1988, the Railway Administration should have approached the Board for post facto approval for continuance of the Scheme from 30 September 1988 and its extension for a further period.

***Solution to the Illustration II:-***

1. Demurrage charges are levied by the Railway Administration for detention of rolling stock by the consignors/ consignees beyond the prescribed free time allowed for loading/ un-loading. Wagons are deemed to have been placed in the siding when the same are placed at the specific point of interchange of wagons fixed between the siding owner and the Railway Administration. The siding owner should also be informed in writing that the wagons had been so placed. Thus, free time allowed for loading/ un-loading should be calculated for levy of demurrage charges from the time the wagons are placed in the siding at the specific point of interchange.

In all the above 3 cases the Railway Administration allowed free time separately for different lots of wagons which were contrary to the rules.

2. This may be shown in a tabular form as shown below:-


Sl. No.	Name of the firms	Total undercharges of demurrage	Period
1.	Food Corporation of India (FCI) siding at Dankuni	Rs.9.19 crore	From April 1997 to October 2000.
2.	Philips Carbon Black Limited (PCBL) Siding, Durgapur	Rs.0.44 crore	From September 1996 to November 2000.
3.	Food Corporation of India (FCI) siding, Dhanbad	Rs.1.59 crore	From June 1998 to November 2000.

3. The claim for demurrage charges are high as the wagons can not be placed at the sidings of the parties in one hook due to capacity constraints. But according to the rules the free time is allowed only from the time during which the first lot of wagons are placed at the sidings of consignees. Thus either the line capacities of the sidings are to be increased to accommodate one full rake or the demands for wagons are to be placed to the Railway Administration in such a fashion so that the entire rake may be placed at the siding in one go.

Slide 1

**Session 5**

Audit of  
Railway Traffic and Earnings




Training Module on Audit of Railways; Session 5

Slide 4

**Organisation of the Commercial Department**

- The Head of the Department – the Chief Commercial Manager
  - responsible to the General Manager for the Commercial policy and efficient working of the Commercial business of the Railway.




Training Module on Audit of Railways; Session 5

Slide 2

**Learning Objective**

- In this session, the participants will be able to understand the basic concepts of the audit of traffic and earnings of the Indian Railways which will help them to focus on audit issues in the work context.




Training Module on Audit of Railways; Session 5

Slide 5

**Functions of the Commercial Departments**

- Responsible for the sale of transportation services generated by a railway - both passenger and merchandise.
- The fixing of rates, fares and other charges
- Ensuring correct collection,
- Accountal and remittance of traffic revenue receipts.




Training Module on Audit of Railways; Session 5

Slide 3

**Overview**

- Indian Railway-
  - Route length - 63,028 km (as of 31-3-2004)
  - Passengers - 5112 millions (in 2003-04).
  - Freight carrier of the country carrying 557.39 million GTKM (in 2003-04)
  - earning - Rs. 24,000 crore (approx).
  - Goods booked – on 8000 booking station and sidings
  - Invoices issued every month - More than 8 Lakh (approx).




Training Module on Audit of Railways; Session 5

Slide 6

**Functions of the Commercial Departments**

- Divided into following branches:
  - Rates and Fares.
  - Passenger Reservation
  - Ticket checking
  - Catering and Vending
  - Public Relations and Publicity
  - Claims for Refunds and Compensation
  - Commercial Statistics
  - Marketing and Sales
  - Traffic Survey
  - Research and Development
  - Prevention of Claims.



Training Module on Audit of Railways; Session 5

Slide 7

**Accounting of the Commercial Department**

- The FA&CAO is responsible for the check of all traffic earnings either coaching or goods.
- If owing to any reason the Railway is losing revenue or is being put to extra expenditure it is the duty of the Dy. FA&CAO/TA on behalf of the FA&CAO (TA branch) to bring the matter to the notice of the CCM for corrective action.

Training Module on Audit of Railways; Session 5 7

Slide 10

**Classification of Earnings**

- Earnings are classified under three sub-major heads with a separate abstract for each such major head viz.-
  - Abstract X- Earnings from Coaching Traffic
  - Abstract Y- Earnings from Goods Traffic
  - Abstract Z- Sundry other earnings.
- The Sub-major heads are divided into Minor, Sub and Detailed heads.

Training Module on Audit of Railways; Session 5 10

Slide 8

**Category of Earnings**

- Coaching traffic includes earning from-
  - Passengers
  - Luggage
  - Parcel

Training Module on Audit of Railways; Session 5 8

Slide 11

**Classification of Earnings cont.**

- The various heads of classification will be referred to by the numbers allotted to them prefixed by the letter of the abstract under which they occur.
- Thus the Detailed head 'Season and Zonal ticket, other than suburban' will be referred to as 'X-122' (X-one-two-two).

Training Module on Audit of Railways; Session 5 11

Slide 9

**Category of Earnings cont.**

- Goods traffic includes earnings from-
  - Coal,
  - Petroleum Oil Lubricant,
  - Container traffic, Live-stock etc.
- Sundry earnings includes-
  - Rents and Tolls,
  - Catering and
  - Sale proceeds of damaged goods, grass, advertisement, diet charges etc.

Training Module on Audit of Railways; Session 5 9

Slide 12

**Accounts Office Balance Sheets**

- Prepared separately for coaching and goods traffic in the Traffic Accounts office
  - For the purpose of taking the Carriage Bills into account
  - Watching their realisations from the firms, departments etc.
  - Incorporates into accounts the traffic cash received, otherwise than through the station balance sheet (e.g., advertisement fees, sale of grass, fares of coupons sold by Tourist Agents etc.)

Training Module on Audit of Railways; Session 5 12

Slide 13

**Traffic Book**

- A compilation which collects and brings to account the entire traffic earnings of a railway.
- Records
  - progress of realisation of these earnings,
  - results of apportionment of traffic interchanged with foreign Railways and deposit private companies and the progress in the settlement of the balances on these accounts.

Training Module on Audit of Railways; Session 5 13

Slide 16

**Comperised Printed Ticket (CPT)**

- Over 90% of reservation of berths and seats in passenger trains have been computerised and
- For such reservations Computerised Printed Tickets (CPTs) are issued.
- Tickets issued from a single paper roll with individual tickets machine numbered serially.
- A parallel number is generated by the computer and printed on the ticket.

Training Module on Audit of Railways; Session 5 16

Slide 14

**Traffic Book contd.**

- The Traffic Book consists of four parts
  - Part' "A"- Station Accounts
    - consolidates earnings of stations for the realisation of which the home railway is responsible.
  - Part' "B"-Adjustment or Division sheets.
    - deals with the results of apportionment of traffic interchanged with the other railways and Deposit Private Companies.

Training Module on Audit of Railways; Session 5 14

Slide 17

**Comperised Printed Ticket (CPT) contd.**

- The main computer can handle several terminals simultaneously.
- No separate series for each class and destination are used.
- Paper rolls put on use on different terminals at distinct serial nos.
- Each ticket is further identified with a separate distinct no. called PNR No, generated by the computer.

Training Module on Audit of Railways; Session 5 17

Slide 15

**Traffic Book contd.**

- Part' "C"- Ledger account of the Home line.
  - ledger account of the home railway for traffic earnings. The heads of account are:
    - Traffic Account
    - Foreign Other Railway account,
    - Deposit Private Companies Account,
- Part' "D"-Abstract of earnings and statement of balance.
- Part' "D"-contains monthly journal entries for traffic earnings.

Training Module on Audit of Railways; Session 5 15

Slide 18

**Comperised Printed Ticket (CPT) contd.**

- Computer summarises the daily collection for each reservation centre.
- Non-issued & cancelled tickets statements, statement of concession orders are also generated.
- Computer also prints a Monthly Statement summarising a class of ticket to different stations which serves the purpose of passenger classification.

Training Module on Audit of Railways; Session 5 18



Slide 19

**Comperised Printed Ticket (CPT) contd.**

- Software used in the Passenger Reservation System [PRS] is known as CONCERT [Country-wide Net work of Enhanced Reservation and Ticketing].
- The operational system of the CONCERT is shown in the next slides.
- CONCERT provides for various accounting and MIS reports in 3 different levels viz. Daily, Periodical and Monthly.

Training Module on Audit of Railways; Session 5 19

Slide 22

**CONCERT – Daily MIS Reports**

- Login and Logout timings of each operator
- Hour Railway summary of Transactions done by each operator (normal hr)
- Hour Railway summary of Transactions before 08.00 hrs.
- Hour Railway summary of Transactions after 20.00 hrs.
- Statement of setting/Resetting of Train Status
- Statement of change of Name/Age/Sex
- Statement of release of accommodation.
- Statement of setting/Resetting of Lost Ticket
- Statement of change of Boarding Point

Training Module on Audit of Railways; Session 5 22

Slide 20

**CONCERT – Daily Reports**

- Daily summary of Gross Earnings
- Statement of Reservation fee and other charges
- Statement of Gross Earnings (Gauge & Class Wise)
- Daily summary of Gross Earnings - PRS site wise
- Daily Summary of transactions (Cash Information)
- Daily summary of transactions (Psgn & Tkt Information)
- Daily statement of Cash Vouchers
- Summary of Concession Vouchers (with Supporting Vouchers)
- Summary of Concession Vouchers (without Supporting Vouchers)
- Daily statement of CST tickets
- Daily statement of Modification / Student / Special Canc. Tickets
- Daily statement of Non Issued Tickets
- Statement of supervisory refunds
- Daily statement of Cancelled Tickets
- Daily statement of bank card tickets

Training Module on Audit of Railways; Session 5 20

Slide 23

**CONCERT – Daily Mis. Reports contd.**

- Statement of Lost tickets.
- Statement of setting of coach damage status
- First Transaction Report
- Status Report - Location wise summary of terminals/earnings/refunds
- Daily statement of Concession Vouchers(ind.loss %)
- MIS figures showing no of operators in Delhi & IRCA with slips handled in different ranges.
- Train-wise and Class wise cancellations statement
- Operator-wise summary of transactions list

Training Module on Audit of Railways; Session 5 23

Slide 21

**CONCERT – Daily Reports contd.**

- Bank card cancellations
- Bank Modification Statement
- Daily statement of Tickets issued on RTC
- Ticket Roll Continuity statement
- Voucher Register
- Bill Register
- Linking Statement of Vouchers
- Statement of mela charges
- Statement of Farakka Barrage charges
- Daily summary of Passenger Classification System
- Daily summary of Passenger Classification Bkgloc
- Daily summary of Passenger Classification
- Detailed Passenger Classification for the System
- Detailed Passenger Classification Booking location wise
- Detailed Passenger Classification Accounting location wise
- Daily statement of PNRs generated PRS site wise

Training Module on Audit of Railways; Session 5 21

Slide 24

**CONCERT – Periodical Reports**

- Periodic summary of Gross Earnings
- Periodic statement of Reservation Fee and other charges
- Periodic statement of Gross Earnings (Gauge & Class Wise)
- Periodic statement of Gross Earnings (Local and Foreign)
- Periodic summary of transactions (Cash Info.)
- Periodic summary of transactions (Cash & Passenger Info.)
- Periodic summary of transactions (Cash Info.) showing day wise totals for the system and New Delhi Accounting location

Training Module on Audit of Railways; Session 5 24

Slide 25

**CONCERT – Monthly Reports**

- Monthly summary of Gross Earnings
- Monthly statement of Reservation fee and other charges
- Monthly statement of Gross Earnings (Gauge & Class Wise)
- Monthly summary of Gross Earnings (Local & Foreign)
- Monthly summary of transactions (Cash Information)
- Monthly summary of transactions (Cash Information) showing day wise totals for the system, accounting location and all booking locations.
- Monthly summary of transactions (Cash & Passenger Information)
- Monthly summary of transactions (Psgn & Ticket Information)
- Monthly statement of Cash Vouchers

Training Module on Audit of Railways; Session 5 25

Slide 28

**CONCERT - Processes involving Accounting Reports generation**

- Generation of the reports
  - Once extraction is done and all the 22 data files are created, reports will be generated. All the reports for all the Booking locations, Accounting locations and for the system will be generated and this will be done at the main PRS site (@ IRCA DELHI, @ NKG Building CAL, @ SC, @ BBVT, @ MMC MAS). Once these reports are generated, they can be printed at various booking locations.

Training Module on Audit of Railways; Session 5 28

Slide 26

**CONCERT – Monthly Reports** contd.

- Summary of Concession Vouchers (with Supporting Vouchers)
- Summary of Concession Vouchers (without Supporting Vouchers)
- Monthly statement of CST tickets
- Monthly statement of Modification/Student/Special Canc. Tickets
- Monthly statement of Non Issued Tickets
- Monthly statement of Cancelled Tickets
- Monthly statement of Tickets issued on RTC
- Monthly Ticket Roll Continuity statement
- Monthly Voucher Register
- Monthly Bill Register

Training Module on Audit of Railways; Session 5 26

Slide 29

**Parcel Way Bills (PWB)**

- Consignments tendered for carriage by passenger trains are booked under the head Parcel / Luggage for which a Parcel Way-Bill (P.W.bills) separately for local & foreign traffic is issued.
- The charges are all on prepaid basis irrespective of chargeable distance.

Training Module on Audit of Railways; Session 5 29

Slide 27

**CONCERT - Processes involving Accounting Reports generation**

- Extraction of the data for the day
  - Everyday, CONCERT system will be shut down in the evening/night by the maintenance team. During this shut down, data will be extracted automatically.
  - The data files will be generated in the directory DK\$ACCNT:[DATAFILES].
  - Everyday, all the accounting data will be extracted into 22 different data files.
  - This is done only once during the shutdown of the CONCERT system in the evening/night and this will be done at the main PRS site (@ IRCA DELHI, @ NKG Building CAL, @ SC, @ BBVT, @ MMC MAS) →

Training Module on Audit of Railways; Session 5 27

Slide 30

**Parcel Way Bills (PWB) contd.**

- Commodities/luggage are charged uniformly, under 4 different Scales depending on the type of service-
  - Scale – R,
    - for Rajdhani service by Rajdhani Express trains.
  - Scale – P,
    - for Premier service, by notified well patronized Mail/Express and Shatabdi Express trains;
  - Scale – S,
    - for standard service, by other Mail/Express trains, Shatabdi Express trains and Parcel Express trains; and
  - Scale – E,
    - for Economy Service, by Ordinary passenger trains.
  - Newspaper and Magazines are charged at same rates, under the lowest Scale – E by all trains.

Training Module on Audit of Railways; Session 5 30

Slide 31

**Passenger Classification**

- A monthly return submitted by a station to its A/Cs office accounting for all kinds of tickets sold and amount collected by the station during the month.
- It is posted from the summary of daily trains Cash-cum-Summary Book as prepared separately for local and foreign (through) traffic.
- The total amount is taken to debit in the Balance Sheets.

Training Module on Audit of Railways; Session 5 31

Slide 34

**Catering Services**

- Two types –
- Departmental catering
  - Functions under CCM with one CCM/Catering exclusively in the Hd. Qrs.
  - Initial records are maintained by unit Managers. They submit their sales & purchase returns to the Hd. Qrs. for accountal.
  - Railway Adm. submits quarterly P/L statement to Railway Board.
  - Yearly P/L A/C prepared by G.M. is to be audited and submitted to the Railway Board.
- Private catering
  - A contract is executed between the private caterers and the Railways.

Training Module on Audit of Railways; Session 5 34

Slide 32

**Rates of Fares/Parcels**

- Rates Coaching Branch at the Hd. Qrs. Level deals with the fares & rates for coaching traffic as prescribed by IRCA from time to time (Through Fare Tables & Parcel etc. rates for all scales (GPS, CPS, CPI, CPII). These rates with maximum & minimum relate to Passengers, Luggage, Parcels Live-stock, Tourist cars & Saloons etc.
- No alteration in the General Classification can be made without the sanction of the Railway Board.

Training Module on Audit of Railways; Session 5 32

Slide 35

**Vending services**

- Vending contracts are executed where there is influx of passengers.
- Safeguards like license fee, rent, recovery of water & electricity charges, security deposits, prohibition of subletting etc. are taken.
- For private catering the responsibility lies with Indian Railway Catering Corporation.
- Articles banned in these contracts-
  - sale of beef, ham & pork
  - sale of alcoholic drinks etc including Pan and Cigarettes/Bidi

Training Module on Audit of Railways; Session 5 35

Slide 33

**Rates - Association of FA & CAO**

- No changes without consultation with FA&CAO.
- In cases where FA&CAO is not in agreement with the CCM the latter will again review the case on receipt of FA&CAOs views; and then decide whether to abandon, amend or adhere to the original proposal.
- The CCM in that case must await the final orders of the GM in the matter.

Training Module on Audit of Railways; Session 5 33

Slide 36

**Sale of Newspaper, Magazines etc.**

- Sale is prohibited on Railway platforms or at any Railway station without the proper sanction.
- Contracts are awarded by inviting applications.
- There should be a specific clause in their agreement in regard to the conditions of sale.
- Sale of obscene books, pictures & publications is banned.
- License fee should be recovered from the contractor.
- Period of contract with bookstall contractors not to be more than 5 years at a time.

Training Module on Audit of Railways; Session 5 36

Slide 37

**Daily Trains Cash Cum Summary Book (DTCS Book)**

- A complete record of all coaching earnings for each day.
- Record of ticket sales and amounts collected, as well as for other items of coaching traffic (except at station where separate cash book is maintained for parcels, luggage, motor cars, animals etc. traffic demurrage & wharfage) are made in the DTCS Book.
- At the end of the month the figures for the three ten day periods (10-day period each,) are consolidated on a separate sheet of the DTC Book by suitably altering the heading on that sheet.
- The figures in the monthly Summary Sheet will form the basis for the compilation of monthly returns & for preparation of Station Balance Sheet for submission to Traffic A/cs Office.

Training Module on Audit of Railways; Session 5 37

Slide 40

**Coaching Balance Sheets (CBS)**

- The personal A/C. of the Station Master.
- Debit side shows classified earnings.
- Credit side shows remittances.
- Supporting documents are attached with CBS.
- The balance represents the unrealised earnings at the close of the month for the collection of which the Station Master is responsible
- This balance forms the first liability in the Balance Sheet of the following month.

Training Module on Audit of Railways; Session 5 40

Slide 38

**Initial Records>Returns/Misc. of Coaching Traffic**

- Verification of cash immediately on arrival at a station & the arrangement for its safe custody.
- Arrangement of tickets in the tubes and check of fares and closing no. of tickets with those shown on the tube and the summary of DTCs.
- Check of Blank Season Tickets Register, paper tickets including BPTs.
- Check of DTCs book & Cash Remittance Notes
- Guard's Signature Book for cash books
- Check of outstanding parcels & goods with the Delivery books, Tally books, Vehicle Register, Register of Unconnected Consignments & Gate Pass Books.

Training Module on Audit of Railways; Session 5 38

Slide 41

**Coaching Balance Sheets (CBS) Debit side**

Items in the Balance Sheet	Returns or Account documents with which checked
1. Opening Balance	1. Closing balance for the previous month.
1. Local Passengers Ordinary-Printed tickets	2. Machine tabulation of total fares for Local traffic
3. Blank Paper tickets	3. Returns of Local Blank Paper tickets.
4. Local Excess Fares	4. Local Excess Fare return (COM/R.19 Revised)
5. Local Luggage	5. Return of Local Luggage (COM/L.26 Revised)
6. Local animals & birds etc.	6. Return of Local animals & birds etc.
Local Government passengers, baggage etc.	7. Return of Local Govt. passengers, baggage etc.

Training Module on Audit of Railways; Session 5 41

Slide 39

**Initial Records>Returns/Misc. of Coaching Traffic contd.**

- Parcel Cash Books
- Recovery of Wharfage & Demurrage charges Returns
- Accountal of Error Sheets
- System of re-weighment of inward parcels and the accuracy of weighing machines & weighbridges.
- Check of list of Station Outstandings
- Regularity in the preparation in the Test Balance Sheets
- Handling Bills
- Unaccounted for Way Bills
- Excess Fare Books

Training Module on Audit of Railways; Session 5 39

Slide 42

**Coaching Balance Sheets (CBS) Debit side**

Items in the Balance Sheet	Returns or Account documents with which checked
8. Local parcels outwards 'Paid'	8. Local outwards paid parcels Cash Book
9. Local parcels inwards 'To Pay'	9. Local parcels inwards 'To Pay' summaries
10. Motor-cars, carriages and boats etc. outwards 'Paid'	10. Local outwards motor-cars, carriages and boats etc. summaries.
11. Motor-cars, carriages, boats etc. inwards 'To Pay'	11. Local inwards motor-cars, carriages and boats etc.
12. Through Passengers Ordinary-printed tickets.	12. Machine tabulation of total fares for Through traffic
13. Through Blank Paper tickets	13. Return of Through Blank Paper tickets
14. Through Excess Fares	14. Through Excess Fare Return.

Training Module on Audit of Railways; Session 5 42

Slide 43

Coaching Balance Sheets (CBS) - Debit side	
Items in the Balance Sheet	Returns or Account documents with which checked
15. Through luggage	15. Return of Through luggage
16. Through animals and birds etc.	16. Return of Through animals and birds etc.
17. Through Government passengers, baggage	17. Return of Through Government passengers, baggage etc.
18. Through parcels outwards 'Paid'	18. Through outwards paid parcels Cash Book
19. Through parcels inwards 'To Pay'.	19. Through parcels inwards 'To Pay' summaries
20. Through motor cars, carriages and boats etc. outwards paid	20. Through inward motor cars, carriages, boats etc. summaries

Training Module on Audit of Railways; Session 5 43

Slide 46

- Audit of Earnings (Local Traffic)**
- Audit should verify that-
    - The assessment of railway charges is correct,
    - The money realised has been collected from the concerned sources and remitted to the treasury/Bank for credit to the railway revenues;
    - The system provides adequate checks and balances;
    - A suitable system of accounting and internal check is in force,
    - There is no fraud, leakage of revenue etc.
- Training Module on Audit of Railways; Session 5 46

Slide 44

Coaching Balance Sheets (CBS) - Debit side	
Items in the Balance Sheet	Returns or Account documents with which checked
21. Do inwards 'To Pay'	21. Do
22. Left luggage, demurrage and wharfage	22. Left luggage, demurrage and wharfage return
23. Sundries	23. Cash transmit notes of miscellaneous receipts
24. Telegraph	24. Statement of Telegraph transaction
25. Terminal tax	25. Statement of Terminal tax
26. Error sheets and Disallowance's	26. Register of Error sheets issued and list of errors.

Training Module on Audit of Railways; Session 5 44

Slide 47

- Computerised System of Traffic Accounts - Passenger**
- The master file is the PALL CARDS TAPE
    - initially created by feeding the existing information in the passenger classification directly into the system software converting the punched card to P BASIC TAPE.
  - The PALL CARDS TAPE (containing the fixed information such as class/time/distance/rate and codes for pilgrim tax/out agency and worked lines etc.) is run with P BASIC TAPE on the computer for updating.
- Training Module on Audit of Railways; Session 5 47

Slide 45

Coaching Balance Sheets (CBS) - Credit side	
Items in the Balance Sheet	Returns or Account documents with which checked
1. Cash	1. Cash Remittance Notes as consolidated in the Cash register
2. Vouchers	2. Original vouchers as consolidated in the Vouchers Register
3. Special credits- (a) Overcharge sheets (b) Re-booking (c) Credits authorised by the Accounts Office (d) Refunds allowed at the time of delivery of Parcels. (e) Freight, demurrage, wharfage, or storage charges on consignments transferred to Lost Property Office (f) Way Bills twice accounted for (g) Special recoveries	3. Special credits- (a) checked Overcharge Sheets (b) Inwards 'To Pay' Parcels Abstracts and Summaries. (c) Credit Advice Notes (d) Checked lists of Refunds (e) Lost property Office Statement (f) Inwards 'To Pay' abstracts and summaries in the case of inwards 'To Pay' Traffic' parcel Cash Book in the case of outwards 'Paid' traffic. (g) Statement of recoveries
Closing balance	4. Outstanding lists

Training Module on Audit of Railways; Session 5 45

Slide 48

- Computerised System of Traffic Accounts - Passenger contd.**
- After checking in Traffic Accounts Branch for errors and omission in data entry, correction cards are punched and run through the computer and the final incorrect list is printed,
    - which forms the basis for the Accounts Office for issue of error sheets to the stations in cases of under charges and over charges.
- Training Module on Audit of Railways; Session 5 48

Slide 49

**Computerised System of Traffic Accounts – Passenger contd.**

- PALL CARDS TAPE is subjected to two important runs for verifying the veracity of information on the master file.
  - The first of this runs prints the list of Passenger Master Records with the information opening number, rate class, distance, pilgrim/terminal tax code etc. for each index no. for each station.
  - The second run attempts a scrutiny of a master file once in six months or when there is change in passenger fare rate, by checking consistency between the rate, distance, type and class.

Training Module on Audit of Railways; Session 5 49

Slide 52

**IMPRESS (Integrated Multi-train Passenger Reservation System) - Information inputs**

- Master fare table,
- Various types of concessions/vouchers and pertinent rules identified with codes,
- Rules for rounding off,
- Rules for collection of other charges like Reservation Fees, Sleeper Charges etc.,
- Rules regarding cancellation, journey
- Train details like timings, intermediate stations, distance between train originating stations and destination station.

Training Module on Audit of Railways; Session 5 52

Slide 50

**Computerised System of Traffic Accounts – Goods**

- Accounts foil of invoices receipt from stations are checked in accounts office:
  - to find out missing invoices,
  - for accuracy of classification, rates and other charges.
- Checked invoices, after codification, are Data entered and verified to detect missing or duplicate invoices.
- The punched cards are then run on the computer to calculate and check freight.
- In case of difference, an incorrect statement is prepared for detecting punching mistakes. The corrected data entries are recorded on a tape called the 'Goods Basic Tape'.

Training Module on Audit of Railways; Session 5 50

Slide 53

**IMPRESS (Integrated Multi-train Passenger Reservation System) - Information Output**

- Daily Terminal Cash Summary Book,
- Daily & Monthly Statement of Transaction (Ticket & Cash),
- Daily & Monthly Statement of Cancellation-Passenger,
- Daily & Monthly Statement of Modification-Passenger,
- Daily & Monthly Statement of Non-issued Ticket-Passenger,
- Daily Statement of Concession Vouchers,
- Monthly Passenger Classification Summary,
- Summary of Refunds for the month,
- Statement of Credit Cards.

Training Module on Audit of Railways; Session 5 53

Slide 51

**Computerised System of Traffic Accounts – Goods contd.**

On the basis of Goods Basic Tape following statements are prepared:

- Statement Incorrect Invoices
- Outward Abstract (MPAS)
- Paid Statement
- 'Paid On Charges'

Training Module on Audit of Railways; Session 5 51

Slide 54

**Audit check of Computerised A/cs- Passenger Accounting**

- A listing of the passenger fares tape/rate master should be undertaken to see that the rates of fares are in accordance with the rates notified by the Rail Board;
- The statement "Checking Passenger Fares" should be examined to see that correction to PALL CARDS TAPE are made without delay
- There has been no loss of revenue owing to under charges having remained undetected because of incorrect rates on PALL CARDS TAPE;

Training Module on Audit of Railways; Session 5 54

Slide 55

**Audit check of Computerised A/cs- Goods Accounting**

- Run to run totals prescribed for processing integrity are actually agreed;
- Total number of invoices agree with the number of cards in the card to tape programme.
- Grand total of cards in this programme agree with the total number of cards in the paid statement and the outward abstract programmes;
- The machine prepared statements' 'continuity check of invoices' agree with the station memo of invoices.

Training Module on Audit of Railways; Session 5 55

Slide 58

**Audit check of Computerised Passenger Reservation System contd.**

- Cases of defective programme and weak controls should be taken up with the administration,
- A detailed report is to be furnished on this.
- Comments of the administration, remedial action taken etc. should also be advised to him.

Training Module on Audit of Railways; Session 5 58

Slide 56

**Audit check of Computerised Passenger Reservation System**

- Base fare of Master Fare Table should be checked with that of Master Fare Table;
- Train-wise Fare-dump listing should be checked with the fare as calculated by the system between a pair of points;
- Fare and other charges collected should be checked from DTC statement generated on audit requisition for selected days and terminals;

Training Module on Audit of Railways; Session 5 56

Slide 59

**Audit check of Passenger classification**

- While selecting the series of printed card tickets into passenger classification, all 'out of series' issues in the preceding month should be selected for scrutiny as far as possible;
- It should be seen that 'out of series' issues in the current month are entered in the 'out of series' Register maintained by the Traffic Account Branch.

Training Module on Audit of Railways; Session 5 59

Slide 57

**Audit check of Computerised Passenger Reservation System contd.**

- Initial records are properly maintained,
- Correct amounts due are collected in respect of concession, collection etc.
- Errors noticed in the various statements prepared on the computer should be carefully analysed to see whether these are due to wrong coding, punching etc. or defects in the programme.

Training Module on Audit of Railways; Session 5 57

Slide 60

**Audit check of Passenger classification contd.**


- The entries in the classification should be examined with reference to the index numbers of tickets supplied to the stations and the highest number of tickets collected as per Ticket Collector's Report;
- Amount of fare realised as per classification is agreed with the corresponding entry in the 'statement of station figures' and placed into Coaching Balance Sheet;

Training Module on Audit of Railways; Session 5 60

Slide 61

**Audit check of Passenger classification contd.**


- The errors noticed in the check of entries in the passenger classification should be traced into the incorrect list;
- The correctness of the action taken on the items in the statement 'List of passengers unmatched basic card' should be checked;
- The records of traffic accounts branch should be examine to see that the cases of under charges/over charges are promptly settled.

 Training Module on Audit of Railways; Session 5 61

Slide 64

**Audit check of Traffic Book and Accounts Office balance sheet**


- The reconciliation of the figures with those in the General books and the correctness of the amount shown under 'Cash in Transit' should be looked into.
- A review of balance sheet should be conducted especially of items not coming otherwise under test audit, in order to see if claim is promptly and correctly made and adequate action is taken to keep unrealised earnings at a minimum.

 Training Module on Audit of Railways; Session 5 64

Slide 62

**Audit check of invoices**


- The continuity of 'paid' invoices should be verified with reference to the register of paid invoice books supplied to the stations,
- The first entry in the current month's paid statement (viz. month of accounts selected for audit) should be compared with the last entry in the previous month's paid statement;
- The continuity of invoices within the 'Paid Statement' compiled on the computer should also be checked;

 Training Module on Audit of Railways; Session 5 62

Slide 63

**Audit check of invoices contd.**

- The audited invoices should be traced into the machine prepared abstract.
- Tracing the audited invoices into the 'paid statement' and verification of debit taken into station balance sheet on account of outward paid traffic should be reinforced by checking of accuracy of the totals of the Paid statement.

 Training Module on Audit of Railways; Session 5 63



# **Session: 6**

## **Audit of Railway Construction**

Session Title: Audit of Railway Construction. .		Session Guide
Instructor's Guide	Reference	Participants' Response
<b>Session Overview</b>		
<b>Welcome</b> participants to the session and remind them that their active participation is critical for the success of each session.	Lecture	
<b>Learning Objective</b>		
<b>Inform:</b> Given the inputs of construction procedure of Indian Railways through group discussion, lecture and PowerPoint slide show, the participants will, at the end of the session, acquire basic concepts of the construction procedure of Indian Railways which will help them to focus on audit issues in the work context..	Lecture	
<b>Basic Concepts</b>		
<b>Discuss:</b> <ul style="list-style-type: none"> <li>● Organisation and classification of Railway Constructions.</li> <li>● Deposit Works.</li> <li>● Survey.</li> <li>● Project Report.</li> <li>● Financing of Works Budget.</li> <li>● Tender and Contracts.</li> </ul>	Lecture and PowerPoint Slide Show 'Session 6 AUDIT OF RLY. CONSTRUCTION'	
<b>Application:</b>		
<ul style="list-style-type: none"> <li>● Distribute Illustration I with questionnaire</li> <li>● Request the participants to answer the questionnaire.</li> <li>● Distribute the solutions to Illustration-I</li> <li>● Discuss the solutions and elicit the views of participants.</li> <li>● Distribute Illustration II with questionnaire</li> <li>● Request the participants to answer the questionnaire.</li> <li>● Distribute the solutions to Illustration-II</li> <li>● Discuss the solutions and elicit the views of participants.</li> </ul>	Session 6 Illustration I & II and Solution to Illustration I & II	
<b>Summarise:</b>		
<b>Distribute</b> Participants' Note. <b>Tell</b> the participants that during the session, we discussed Organisation, Functions and Accounting of the Commercial Department, Traffic Book, Mechanisation of Traffic Accounts procedure etc. etc. <b>Invite</b> questions on themes discussed. If participants have any doubts/clarifications about themes, clarify the same. Answer participants' queries. <b>Thank</b> the participants and bring the session to a close.	Session 6 Participants' Note	

**Training Method:** Interactive Lecture and Power Point Slide Show.

**Materials Required:** Power Point Slides, Projector, White Board, Marker Pen and Participants' Note

## Session Title: Audit of Railway Construction

### Session Overview:

• The Railway Construction Department executes the work of construction and maintenance under its own organisational setup till the date of handing over the Project/work to the Traffic i.e. Open Line Organisation.

### Organisation of Railway Construction

- The Railway Construction Department consists of three wings.
  - Civil Engineering Department
  - Signal & Telecommunication Engineering Department (including Microwave).
  - Electrical Engineering Department.
- These three wings are headed by:-
  - Chief Administrative Officer, Construction (CAO/Con), / Chief Engineer, Construction (CE/Con).
  - Chief Signal & Telecommunication Engineer, Construction (CSTE/Con)
  - Chief Electrical Engineer, Construction (CEE/Con), respectively.
- The construction activities of the Railways are either under the administrative control of a Chief Engineer (Construction) reporting directly to the General Manager (GM) of an Open Line or under the independent administrative control of a Chief Administrative Officer (Construction) reporting directly to the Railway Board.
- CAO(Con)/ CE(Con) shall:-
  - provide necessary direction and control for the efficient and economical execution of all works under his charge.
  - maintain liaison with the Open Line Organisation and shall follow the general policies and procedures laid down for the execution of works.
  - shall exercise necessary budgetary control and shall co-ordinate with CE of Open Line for the completion of budget at every budgetary stage.
  - shall co-ordinate with CE of Open Line with regard to placement of personnel for the various assignments under his charge keeping in view the overall career development of such personnel.

- The CAO(Con)/CE(Con) will be assisted by the FA&CAO/Construction of a Zonal Railway in enforcing strict attention to the regulations concerning the
  - disbursement of money
  - the custody of stores
  - the maintenance and submission of accounts.

### Classification of Construction Works

#### Original Work

- The works are classified as Construction which comprises of all new Constructions (whether entirely new or additions) alterations to the existing works or special repairs to special Construction or to newly purchased or constructed buildings / Equipment or abandoned works to bring them into use.

#### Construction of New Line

- After Expenditure Committee's approval and Railway Board's sanction to detailed estimate construction wing of a Zonal Railway starts the Civil Engineering work of a new line project viz. Earth Work, blanketing, spreading of ballast, laying new line on sleepers etc.

#### Doubling of existing line

- In this case also, process is same as described above.

#### Electrification of existing open line

- Construction wing does this work on behalf of open line wing---Construction of ROB (Road over bridge) as joint work with State Government.

#### Deposit Works

- It is applied to the works of construction or repairs, the cost of which is not met out of the budget of Works Department but is made from other sources.
- Funds may be placed at the disposal of Construction Department before commencement of construction after getting acceptance of the estimates from other Government Departments.
- Works executed for State Government/Municipalities/other Government Departments fall under this category.

### **Commencement of Work** (Source: Indian Railway Code for Engineering Department. Para-1101)

- The commencement of a work or the incurrance of any liability thereon should be authorised by a competent authority by a written order sanctioning the detailed estimate therefor and allotting the requisite funds.
- No work should be commenced and no liability or expenditure incurred on a work until a detailed estimate for each has been sanctioned and an allotment of the requisite funds made by competent authority. Following are the exceptions:
  - for the construction or purchase of new work or asset under the category of new minor works if estimated to cost upto Rs. 5,000;
  - for renewals and replacement of existing works and assets chargeable to Open Line Works Revenue as a new minor work if estimated to cost upto Rs.10,000;
  - for renewal and replacement of assets charged to revenue if estimated to cost upto Rs.50,000 and
  - for repairs and reconditioning of existing assets if estimated to cost upto Rs.50,000.

### **Works started on Urgency Certificate** (Source: Indian Railway Code for Engineering Department. Para-1103)

- Expenditure or liability may be incurred prior to the receipt of sanction of the authority in case of works which are considered to be urgently necessary to safeguard life or property or to repair damage to the line caused by flood, accident or other unforeseen contingency, so as to restore or maintain through communication.
- In such works the Divisional Engineer should authorise the commencement of the works and submit a report to the authority competent to give administrative approval to the work and to allot the required funds.
- This urgency certificate/urgency report should contain:
  - a description of the work;
  - the date of commencement;
  - the circumstances which bring the work within this category;

- the maximum probable cost of the work with an enclosure containing an abstract of calculations and
- the date by which a detailed estimate of cost will be submitted.

### **Material Modification** (Source: Indian Railway Code for Engineering Department. Para-1109)

- No material modification in a work or scheme as sanctioned should be permitted or undertaken without the prior approval of the authority who sanctions the estimate. The following may be treated as material modifications on line under construction and open line works estimated to cost Rs.1 crore and above:
  - any change in the alignment likely to affect the facilities offered to the public in the neighbourhood or likely to increase or decrease the length of the line by over 1 km.;
  - introduction of any new station or omission of any station;
  - any alteration in the type or number of engines or vehicles provided in an estimate for rolling stock;
  - a change in the layout of a yard affecting the general method of working or increasing or reducing the number of trains that can be dealt with;
  - the introduction or omission of any work or facility involving a sum of Rs.5 lakh and over;
  - any modification of a sub-work provided for in the estimate of a sanctioned work involving an additional outlay on that sub-work of more than Rs.5 lakh;
  - the introduction of the new sub-work not provided for in the estimate of a sanctioned work involving an out lay of more than Rs.5 lakh.

### **Agencies for Executing Works**

- Works of construction repair or maintenance may be carried out through the agency of either-
  - departmental labour, or
  - contracts, or
  - other departments and public bodies such as municipalities, port trusts, etc., or
  - other Railway Administrations.

## Classification of Survey

- Various kinds of surveys are prevalent in Railways-

- Traffic Survey
- Reconnaissance Survey
- Preliminary Survey
- Final Location Survey

### Traffic Survey

- It is a detailed study to make a forecast of the traffic prospects to facilitate the most promising route and category of line (Para 210-211 E) to be constructed in case of new lines and to assess the quantum of traffic to determine the traffic facilities to be provided on existing line.

### Reconnaissance Survey

- This should apply to all rapid and rough investigations of an area to determine the technical feasibility and approximate cost of one or more routes for a projected railway line from a general examination with the help of Contoured Survey of India Maps and other available materials without a more careful investigation of the field and by wing instruments like Prismatic Compass, Clinometer and similar instruments.

### Preliminary Survey

- This is a thorough and detailed instrumental examination of the route /routes selected as a result of Reconnaissance in order to obtain close estimate of the projected line.

### Final Location Survey

- Generally this is a post investment investigation to prepare working details and to make accurate costing by dint of theodolite and/or Electronic Distance measuring instruments and by making a report along with fuller and detailed plans and sections.

### Project Report

- At the conclusion of investigation, the Project Investigator shall formulate a report which is called 'Project Report' based on Final Location Survey.
- The project report may be compiled under captions indicated below:-
  - Introduction
  - Characteristics of project area
  - Standards of Construction
  - Route Selection
  - Project Engineering, Estimation of Cost and Construction schedule and

- Conclusions and Recommendations.

### Preliminary Works Programme (PWP) (Source: Indian Railway Code for Engineering Department. Para-601 onwards)

- The PWP is prepared by CAO (Construction)/CE in advance after taking into account all proposals and ensuring the overall priorities within the ceiling given by the Railway Board in consultation with GM and associate Finance.
- After getting clear directives from the Railway Board the total outlay along with a list of PLAN HEADs is determined.
- The annual budget of the Railways consists of assessment of earnings and expenditure forming part of Revenue Budget and sent to the Board along with the PWP.

### Final Works Programme (FWP) (Source: Indian Railway Code for Engineering Department. Para-623)

- After having examined the individual Railway's Programme and discussion with the General Manager, the Railway Board will decide the marks which should be undertaken during the following year and which should be included in the Final Works Programme. The Railway Administration will then modify their Works Programme as a result of the Board's decision and send their Final Works Programme to the Railway Board by the stipulated date.

### Works Budget (Source: Indian Railway Code for Engineering Department. Para-624)

- The revised and budget estimates for the construction, acquisition and replacement of assets are briefly known as Works Budget.

### Demands for Works Grant (Source: Indian Railway Code for Engineering Department. Para-625]

- The proposal of Government in respect of sums required to meet the expenditure from the Consolidated Fund of India are to be submitted in the form of Demands for Grants to the Parliament. The Demand shall be for gross expenditure, the credits or recoveries being shown in form of footnotes to Demand.
- The Demand for Grant for Works Budget is:- Demand No.16--Asset-acquisition, Construction and Replacement.

## Financing of Works (Source: Indian Railway Code for Engineering Department. Para-626 onwards)

- **Works chargeable to Demand No.-16** Assets-Acquisitions Construction and Replacements are financed from railway revenue when they are charged to OLWR or financed from Capital, Depreciation Reserved Fund, Development Fund, Accident Compensation Safety and Passenger Amenities Fund. Expenditure budgeted under "capital" involves increase in the Capital-at-charge of the Railways and hence is the liability for payment of dividend to General Revenue subject to the relief/exemptions granted by the Convention Committee. "Works expenditure" of the Railway is thus financed from Revenue, Railway Funds and Capital provided by the General Revenues.

### Stages prior to execution

- Prior to execution of any work, four items are basic pre-requisite:-
  - Administrative Approval,
  - Expenditure Sanction,
  - Technical Sanction,
  - Appropriation or Re-appropriation of Funds.

### Administrative Approval

- For the execution of every work, concurrence of the Competent Authority from the Administrative Department requisitioning the work is required. Administrative approval is accorded on the basis of primary estimates.

### Expenditure Sanction

- After the administrative approval is received from the Administrative Department, expenditure sanction is accorded to indicate that funds for the project have been provided and liability can be incurred.

### Technical Sanction

- After receipt of Administrative approval and expenditure sanction, detailed estimates are required to be prepared for technical sanction. Proposals should be technically viable. It is accorded by the competent authorities in the Construction Department.

### Appropriation or Re-appropriation of Funds

- Appropriation means assignment to meet special expenditure of funds included in a primary unit of appropriation.

- Re-appropriation means the transfer of funds from one unit of appropriation to another.
- As a fundamental principle, no outlay on a work should be incurred without funds having been allotted for it by appropriation or re-appropriation.

### Construction / Works Accounting

- Construction/Works accounting system is meant to monitor expenditure against sanctioned estimates.

- Works accounts are designed so as to incorporate the techniques of double entry system of Book-Keeping in Government Accounts.

- The system ensures integration of financial and cost accounts to bring about cost control.

- For construction departments, the accounts showing expenditure and receipt under various heads are sufficient for any further reference or security.

- However, for works department, this is not enough. Additional information showing cost of each work is kept separately to ascertain the value of assets.

- The accounts of Section Engineers of the Railways [Permanent Way Inspectors (PWIs), Inspector of Works (IOWs) and other Inspectors] are kept in the Division and it includes one or more sub-divisions.

- Deputy Chief Engineers (Construction) / Divisional Engineers along with Accounts wing are posted in each Division to check and compile the divisional accounts under the supervision and responsibility of FA&CAO/Construction, who also executes internal audit and renders financial assistance to the Senior Divisional Officers.

- Compiled Accounts are rendered monthly to the FA&CAO/Construction by the Accounts Officers of the Construction wing of the Divisions.

### Divisional Accounts

- Any thing received either in cash or in kind during a month should pass through monthly accounts. The following accounting records are maintained in a Railway Division/Sub-division.

- Cash Book
- Measurement Book
- Muster Roll
- Register of Works
- Contractor's Ledger
- Work Charged Establishment

- Various Suspense Accounts
- Stores Accounts
- Tools and Plants Accounts
- Deposits
- Revenue Accounts
- Register of Journal/Transfer Vouchers
- Monthly Accounts

### Cash Book

- The term cash includes legal tender coins, notes, cheques, Deposit-at-call receipts, Bank drafts. The Divisional Accounts Officer is the primary disbursing officer and all receipts and payments on Government accounts are recorded daily in the Cash Book. The Divisional Accounts Officer is personally responsible to check and certify cash balances in the chest.

### Measurement Books (MBs)

- The payment for all work done otherwise than by departmental labours and for all supplies e.g. payment to contractors and others for work done, supplies made or service rendered are made on the basis of measurements recorded in the Measurement Books (Form E 1313). The MB is a very important initial accounting record of quantity of work done by a contractor or by labourers employed departmentally or material received. All measurements should be recorded neatly and directly in MB at the site of work only. All MBs should be serially numbered and a Register of MBs in the Form 1314 should be maintained by recording serial number of MB issued.

### Muster Rolls

- Muster Rolls (Form E 1304) are used for getting the work done departmentally through daily rated workers. A roll is issued for a specific period not exceeding one month at a time. One or more muster rolls can be kept for each work, but should never be prepared in duplicate.

### Register of Works

- The Register of Works is the permanent and collective record of expenditure incurred in the division during a year on each work. This record is a collective record of expenditure designed for effecting control of expenditure on works with reference to estimates. This record is maintained in division and this is posted monthly as soon as the bills against estimates are passed by Accounts.

### Contractor's Ledger

- It contains running account with each contractor showing payment and recovery of advances paid and materials and amount due for the value of work done relating to one or several works or to materials purchased for him or supplied to him. Accounts relating to Contractors should be kept, as personal accounts in Contractor's Ledger in Form E 1483 and a separate folio should be opened in the Contractor's Ledger for each Contractor.

- The Contractor's Ledger should be posted as bills are paid and it should be closed and balanced monthly.

### Work Charged Establishment

- The payments to the work-charged establishment are made monthly in the same manner as made for the regular staff but on a different Form No.91 of Appendix 9 of Indian Railway Establishment Manual and the expenditure is charged direct to the work on which the staff is actually employed.

### Suspense Accounts

- Suspense Accounts are opened to record transactions of a temporary character, which are either of undeterminable classification or are unadjustable as final outlay.

### Stores Accounts

- The general administration of all the stores of a division is vested in the Divisional Officer on whom devolves the duty of arranging for (i) acquisition of Stores, (ii) their custody and distribution according to the requirement and (iii) their disposal.

- The accounts of stores are based on the principle that either the cost of acquisition of stores should be debited to the final head of the account concerned at once or it should be kept in suspense account pending clearance as the materials are actually issued by debit to specific head of accounts of works.

- A numerical account of receipts, issues and balances has to be maintained for all stores even though debited to final heads with a view to controlling the balances.

### Tools and Plants Accounts

- The tools and plants of a division are of two kinds:-

- General and ordinary tools and plants i.e. those required for general use of the division.
- Special Machinery and Equipment i.e. those required not for any general work but for a specific work.
- A Tools and Plants Register in the Form E 1462 should be maintained by Section Engineer and to be submitted after close of each financial year to the Divisional offices for check apart from submitting periodical return prescribed by CE and also yearly balance return in the Form E 1456 by the Divisional Engineer to the Chief Engineer.

### Deposits

- Deposit transactions of Railway Construction Department are:-
  - Cash deposits of subordinates as security
  - Cash deposits of Contractors as security
  - Deposits for work to be done
  - Sums due to Contractor on closed accounts
  - Miscellaneous deposits.

### Revenue Account

- Revenue is assessed and realised in accordance with rules and orders made/issued by the Government. When collected it should be brought to the accounts. Revenue is grouped into the following :-
  - License Fee of Buildings/ Lands
  - Sales Proceeds
  - Miscellaneous

### Register of Journal / Transfer Vouchers-JVs / TVs

- The Register of JVs/TVs indicates all the transfer entries for rectification of errors. TV/JV is assigned Serial Number. The Register is closed as soon as possible after expiry of the month.

### Monthly Account

- An account (known as monthly Account Current) is prepared of the entire expenditure (including expenditure through TVs/JVs) debited against the grant according to Major and Minor Heads of Accounts and is called "Classified Abstract" of expenditure.

### Preparation and Passing of bill

- Prior to the preparation of a bill of Contractor/Supplier, the entries in the Measurement Book relating to specifications

and quantities of work/stores supply should be scrutinised and calculations of Content/Area should be checked arithmetically.

- The bill should then be prepared from the Measurement Books in the forms prescribed.
- Full rates as per agreement/ supply order should be allowed only if the quality of work done or supplies effected conform to the specification.
- In case of supply no payment is permissible until the stores have been received and found in good condition and conforming to specification.
- In case of payments permitted only on production of despatch document, the payment should be treated as advance payment against final settlements on receipt of supply.
- In case of materials issued to the Contractor, necessary recoveries on account of cost of material should be effected from each running bill at the rates specified for the purpose.

### Forms of Bills ((Source: Indian Railway Code for Engineering Department. Para-1335)

- The authorised forms of bill to be used for making payment to the Contractor/Supplier are as under:-
  - Petty Contract Bill (Form E.1336)
  - Running or On Account bill, (Form E.1337)
  - Final Bill (Form E.1338) and
  - Hand Receipt (Form E. 1339)

### Payment for Work Done

- The petty bill (Form E.1336) should be used for making payments to Contractors in connection with works or supplies when a single payment is made for job or Contract on its completion. It may also be used in paying several Contractors employed on parts of large work or several works on one section of the line.
- The Running or On Account Bill (Form E.1337) is used in contract works only and not for supplies. This is used for intermediary payment to the contractor for the quantity of work done upto that date of an ongoing/running project. Both quantities and amount of each item of work should be shown separately in the bill except in the cases of advance payment for work done but not measured.
- The Final Bill (Form E.1338) should specifically provide that the Contractor



concerned accepts the amount billed for as a final payment/settlement of all his claims in respect of the particular work

- The Hand Receipt (Form E.1339) is intended to be used for all miscellaneous payments and advances for which Forms E.1336 to E.1338 are not suitable. This is generally not used in Railways for works payment.

### **Reconciliation of Allocation Registers with General Books (GBs)**

- It is a must that
  - The total expenditure in the various allocation registers should be verified each month with the debit to each Abstract in the General Books.
  - A certificate of examination/verification is enclosed on the register.
  - Monthly totals of each register should be posted in yearly register month to month to provide figures for preparation of Working Expenses portion of Yearly Administrative Capital and Revenue Accounts.

### **Adjustment Memo ((Source: Indian Railway Code for Engineering Department. Para-1461)**

- In carrying out the adjustments the officer/subordinate initiating adjustment should fill the Adjustment Memo in the Form E 1461, by recording invariably the reason for adjustments proving necessity of adjustment.
- Necessary entries should be made by the Accounts Officer in the respective Registers.

### **Adjustment Bills**

- Adjustment of charges incurred by one departmental officer on behalf of another, should, as a rule, be made on the basis of accepted bills.
- The form on which bills for acceptance should be prepared is Form E-1463/A-1138.
- The bill (Form E-1463) is also used for preparing claims, which are settled by each recovery.
- A register of bills recoverable should be kept in Form E-1464/A-1139 to watch recoveries.

### **Contracts and Tenders**

- IT includes the following:
  - Essential ingredients, Categories and Forms of Contracts.

- Tenders, Notice inviting Tenders, Accounting of Tender documents, Pre-qualification of Tender, Receipt, Opening and Acceptance, Negotiations, Earnest Money Deposit, Security Deposit, Liquidated Damages, Variation of Contract of Contract Conditions, Extension of Time of Completion, Recession of Contract, Escalation of Clause, Warranty Clause and Arbitration.

### **Schedule of Rates:**

- To facilitate the preparation of essentials and to serve as a guide in settling rates in connection with contract agreements, a "Schedule of Rate" (S.O.R) is maintained for each kind of work commonly executed.
- It is prepared on the basis of rates at which works are being actually executed and is revised periodically on the basis of prevailing market rate and those paid by other government departments as prescribed by General Manager.
- "Schedule of Rates, of a particular Railway" shall mean the 'S.O.R' issued under the authority of Chief Engineer of the Railway from time to time.

### **Contracts**

- When two or more parties have a common intention communicated to each other to create some obligations between them, there is said to be an agreement.
- An agreement, which is enforceable by law, is a contract.
- According to Section 10 of Indian Contract Act 1872, only those agreements are enforceable by law that are made by free consent of parties competent to contract, and for a lawful consideration, and with a lawful object and are not expressly declared to be void.
- Contract shall mean and include the Agreement or Work Order, the accepted schedule of rates or the SOR, modified by the tender percentage for items of work quantified / unquantified, the general conditions of contract, the special conditions of contract, if any, the drawings, the specifications, the special specifications, if any, and tender forms, if any.

### **Essential ingredients of Contracts**

- The following are the essential ingredients of contract:
  - Offer made by one person who is called "Promisor".

- Acceptance of an offer by another person who is called the "Promisee".
- Doing of an act by promisor for promisee is called "Consideration".
- The offer and acceptance should be for a lawful object.
- To make a valid and binding agreement, both the parties should be competent.
- In a contract there should be a proposal, a communication of the proposal, and a communication of acceptance of proposal.
- An offer may lapse for want of acceptance within validity period, or be revoked before acceptance.
- Acceptances produce something which can not be recalled or undone.
- A contract springs up as soon as the offer is accepted and imposes an obligation upon the person making offer.
- The tenderer is within his right to withdraw or modify his offer before acceptance.

### **Principles to be observed in framing Contract agreements**

- The basic principles to be kept in view by those who are authorised to enter into contract or agreements are given below: -
- The terms of contract must be precise and definite, and there should be no room for ambiguity or misconstruction and the matters to be agreed upon should include, in detail, the following: -
- What the contractor is to do; when and to whose satisfaction is to do; and on what terms.
- What the railway administration is to do; and on what terms.
- What payment is to be made; what is to cover, to whom it is to be made, and the method and basis of making it.
- The responsibility of contract in respect of adequate supervision, care of Government property, and the protection of outside interest and those of the staff and workman.
- The terms on which variations and modifications, if any, are to be permitted; and authority competent to order and assess them, and the occasion and basis of such assessment.
- The measures to be adopted in the event of a breach of the contract by either party thereto; and the correct method of and the grounds for determination thereof.

- The method of settling disputes
  - As far as possible, legal and financial advice should be taken in the drafting of contracts before they are finally entered into. Standard forms of contract should be adopted wherever possible, the terms to be subjected to adequate prior security.
  - The terms of contract once entered into should not be materially varied except in consultation with the competent legal and financial authority.
  - No contract involving an uncertain or indefinite liability or any condition of an unusual character should be entered into without the previous consent of the competent legal and financial authority.
  - Provision must be made in contracts for safeguarding Government properties entrusted to a contractor.
  - In entering into long term agreements or contracts, consideration should be given to the desirability of providing for railway administration unconditional power to cancel or revise the agreement at any time after the expiry of six months notice to that effect.
  - The power to retain and "set off" all claims whether arising out of a particular contract or out of any transaction or claim against the contractor should be secured for the railway administration.

### **Forms of Contract**

- There are various forms of contract:
  - Piece Work Contract
  - Work Order
  - Lump Sum Contract
  - Schedule Contract
  - Contracts for Zone Works and Engineering Materials.

### **Forms of Works Contract:**

- The forms of contract primarily intended for application to Works Contract are:
  - Lump Sum Contract
  - Schedule Contract
  - Piece Work Contract

### **Lump-sum contract**

- The Lump Sum Contract is a contract under which the contractor engages to carry out the work or effect supply as specified and within a given period for a fixed total sum; his receipt of this sum is dependent on his completion of the

work or supply to satisfaction and time, irrespective of the actual quantities and kinds of work done or materials supplied in achieving his result.

### **Schedule Contract**

- The Schedule Contract is a contract under which the contractor engages to carry out a work or effect supply as specified and within a given period, at fixed unit rates or prices for each of the various items comprising such work or supply, the payment to contractors being dependent on actual quantities and kinds of work done or materials supplied in completing the work or supply to specification and time. The approximate amount of contract based on approximate quantities may, however, be shown.

### **Piece Work Contract:**

- This means a contract under which only unit rates or prices for various kinds of work or materials are agreed upon, without reference either to the total quantity of work to be done or materials supplied; or to the quantity of work to be done or materials supplied within a given period. The Zonal Contract adopted by Railways fall under this category.

### **Contracts for Zone Work and Engineering Materials**

- It is often advantageous to allot all minor works and all works of repairs and maintenance in a particular Zone for a definite period to one contractor. It may likewise be advantageous to make these contractors who can be called Zonal Contractor responsible for the conveyance or supply of engineering materials, as and when required, in a particular Zone, during a specified period.

### **Rate Contract**

- The rate contract is a contract under which, during the period of its currency, the contractor engages to supply materials on demand, irrespective of quantity, at fixed unit rates or prices, within a given period of receipt of such demand. This form of contract is primarily intended for application to "Stores" contracts.

### **Running Contract**

- The running contract is one under which, during its currency the contractor engages to supply, and the others party to the contract to take, a specified quantity (with a percentage

tolerance either way) of materials, as and when ordered, at fixed unit rates/prices within a given period of the receipt of such order. This form of contract is primarily intended for application to "Stores" contracts.

### **Fixed Quantity**

- This means a contract for a definite quantity of materials to be delivered in one or more instalments, delivery of each instalment being completed within a definite date

#### **Work Order:**

- As soon as possible after acceptance of a tender, the successful tenderer should be called upon to furnish the revised security and to sign the formal Agreement/Work Order.

- For Zone Contracts, separate Work Orders are issued for each specified work under the agreement.

### **Work Order:**

- For contracts for specified works, the contract document required to be executed by the accepted tenderer shall be either Agreement or Work Order.

- An Agreement/Work Order Register may be maintained in form E-1263.

### **Notice Inviting Tender:**

- Sufficient notice should be given for submission of tenders, which in case of large works should not be less than a month. The prescribed period may be departed from in most exceptional circumstances only and then too in consultation with the Financial adviser and Chief Accounts Officer.

- The tender notices should in all cases state: -
  - The place and time where contract documents can be seen.
  - The place and time where blank tender forms can be obtained
  - The amount, if any, to be paid for such documents with mode of payment.
  - The place, where, the date on which and the time when tenders are to be submitted and are to be opened.

### **Classes of Tenders**

- The following are the different methods of obtaining tenders that may be adopted: -
  - By advertisement ("Open" Tenders);
  - By direct invitation to a limited number of firm/contractors ("Limited Tenders") and

- By invitation one firm/contractor only ("Single' tenders)

### Open Tender System

- The system of invitation to tender by public advertisement in the most Open & Public manner possible should be used as a general rule and must be adapted subject to certain exceptions.

### Limited Tender System

- This system is adopted where for reasons which should in public interest, it is considered not practicable or advantageous to call for open tenders. This may be done with the concurrence of the Financial Adviser and Chief Accounts Officer and approved by competent authority. The reasons for inviting limited tenders should be recorded in writing while approaching finance for concurrence.

### Single Tender System

- This system may be adopted when:
  - There is sufficient reason which indicates that it is not in the public interest to call for tenders by advertisement.
  - The demand is so urgent that any additional expenditure involved by the elimination of open competition must be incurred.
  - In the case of an emergent situation affecting repair, maintenance, out-turn, operation etc., which should be recorded in writing, the purchase of non-proprietary articles may be made on single tender basis.
  - Single tenders can be invited from the firms which are borne in the list of Approved Contractors.

### Accounting of Tender Documents:

- The following procedure is laid down for accounting of tender forms in the Division:
  - All tender forms should be duly initialled.
  - All tenders forms should be kept in the charge of the concerned Departmental official before being issued to the tenderers.
  - All forms should be entered in the register alongwith number and date.
  - The register should contain a chronological record of issue of tender forms.
  - Tender forms may be sold on payment of prescribed fees.

- The Tender forms should be issued individually and acknowledgements should be taken on a register to avoid bogus/fake tenders

- Tenders when transmitted by post should be sent through registered A.D. only.

### Prequalification Tender

- Pre-qualification of tenderers is undertaken for large/complex works calling for specialised expertise, special equipment, so as to confirm invitation of bids from firms/companies/contractors with a demonstrated capability in executing works. The works on earthwork, tumbling, cut & cover construction, Buildings & structural works when contract value is likely to exceed Rs.50 lakhs could attract pre-qualification. This apart, some of the Bridge works, Electrification works, S&T works and other miscellaneous works of complex nature will come under this category. Accordingly, in this procedure the ability of the interested firms is judged by taking into account:

- Experience and past performance.
- Capability with reference to personnel, equipment, plants.
- Financial position/stability.

- Pre-qualification procedure precedes tendering action.

- Pre-qualification documents should give broad details of the scope and magnitude of the proposed work. The need is decided by the HQ with the concurrence of associate Finance.

### Opening of Tenders

- The following precautions are to be observed while opening the tenders by the officer who opens the tender and by the Accounts representative witnessing the tender opening. They should:

- Initial (with date) the cover containing tender, front cover page and every page of the tender on which the rates or special tender conditions are quoted.

- Initial (with date) all corrections in the schedule of quantities, schedule of materials to be issued and specification and other essential parts of the contract document irrespective of the fact that they contain or do not contain any correction.

- Mark and initial all overwriting in red ink. The corrections, overwriting and omissions should be serially numbered and total

number of such corrections etc. should be clearly mentioned at the end of each page of the schedule attached to the tender and attested with date.

- Clearly indicate on each page of the schedule attached to the tender, any ambiguities in rates quoted by the tenderer in words and figures.
- Specifically record whether samples have been supplied or not alongwith the tender.
- All tenders should be opened in the presence of intending tenderers if the tender value is above Rs.10,000/-
- Tenders should be opened at the specified times, date and place by the officers nominated for the purpose. The presence of an Accounts representative at the time of tender opening is also required.

### Delayed and Late Tenders

- Delayed Tenders, i.e., tender received after due date and time of receipt but prior to opening should be dealt in the same manner as tenders received in due time.
- Late Tenders, i.e., tenders received after due date and time of receipt as well as date of opening should be opened by concerned branch officer and marked distinctly in red ink on the envelope as well as on the tender papers.
- Both Delayed and Late tenders should be included in Tenders Registers and Comparative statement, with suitable remarks against them and separate instructions issued by Rly. Board from time to time, for dealing with Delayed & Late tenders should be followed.

### Comparative Statement

- A comparative statement of all tenders received showing comparative rates and other important tender conditions should be drawn up by the branch concerned and verified by the Accounts Department. It must be assured that all tenders received are tabulated in the comparative statement and put up to a Tender Committee constituted for the purpose for consideration without any screening by any other official. A briefing notice is also required to be prepared for submission to the T.C.

### Tender Committee (TC)

- Tender Committee should be constituted by the authority competent to accept the tenders

where the tender value involves more than Rs.10,000/-. When the GM is the authority competent to accept the tender, the H.O.D. concerned should arrange to constitute 'Tender Committee', which shall consist of:

- Minimum three members of whom one should be of accounts, one of the concerned Executive department and the third from another department which also deals such contract matter.
- The Tender Committee should be so constituted that an officer recommending acceptance in his own capacity should not also be the accepting authority of the same tender. In such cases the officer concerned should put up the Tender Committee's proceedings to the next higher authority for acceptance notwithstanding the fact that the Tender Committee's recommendations are within his power of acceptance.

### Negotiations

- In exceptional cases negotiations may be resorted to, but negotiation should be with all the tenderers who have initially quoted the rates alongwith the existing contractor.

### Earnest Money Deposit

- Earnest money is a security against loss the Railway is to suffer, in the event of the contractor failing to undertake the contract or to furnish the required security within the appointed time after the acceptance of his tender or until such time as the sums due to him form a sufficient guarantee as the case may be. Earnest money is forfeited if the tenderer fails to observe or comply with the stipulation.
- The tenderer shall be required to deposit earnest money with the tender for the due performance with the stipulation to keep the offer open till such date as specified in the tender, under the condition of tender. The earnest money shall be 2% of the estimated tendered value as indicated in the tender notice. The earnest money shall be rounded to nearest Rs.10. This earnest money shall be applicable for modes of tendering. (*Regulation for tenders and contractors clause 5 of GCC*)
- The Rly. Administration may on discretion fix lower or higher percentage and/or maximum amount of earnest money for any work in view of the value & nature of work and safeguards Rlys interest:

- Interest of the Government should be safeguarded while allowing mode of deposit of Earnest money
- The earnest money should be in cash or in any of the following forms;
  - Deposit receipts, pay orders, demand drafts. These forms of earnest money could be either of the State Bank of India or any of the Nationalised Banks. No confirmatory advice from the Reserve Bank of India will be necessary.
  - Deposit Receipts executed by the schedule banks (State Bank of India and the Nationalised Banks) approved by the Reserve Bank of India for this purpose. The Railways will not, however, accept deposit receipt without getting in writing the concurrence of the Reserve Bank of India. (*Regulation for tenders and contractors clause 5 of GCC*)
- Earnest Money of all unsuccessful tenderers should be refunded as expeditiously as possible.
- Earnest Money deposited by the successful tenderers, if he desires, be appropriated towards the amount of Security Deposits to be furnished by him later on.

### Security Deposit

- Security deposits are to be paid by contractor in token of the due fulfilment of a contract. It may also be collected by deduction from running bills of the contractor at prescribed rates. The contractor, may, however, pay the security in cash or in other accepted forms of payment.
- Payment of security Deposit may be in the following forms :
  - A deposit of cash.
  - Govt. security including State Loans Bonds at 5% below market value.
  - Deposit receipts, Pay Orders, Demand Drafts and Guaranteed Bonds, either of SBI or of any of the Nationalised Banks.
  - Guaranteed Bonds executed or deposit receipts tendered by all scheduled banks.
  - A deposit in the Post Office Savings Bank
  - A deposit in the Nationalised Saving Certificates, twelve year National Defence Certificates, ten years Defence Deposits, National Defence Bonds and Unit Trust

Certificates at 5% below market value or at the face value, whichever is less.

- Without the special orders of competent authority, no Security deposit should be refunded to the contractor.
- Unless otherwise specified in the special conditions, if any, the security deposit/rate of recovery/mode of recovery shall be as under:
  - Security deposit for each work should be 5% of the contract value,
  - The rate of recovery should be @ of 10% of the bill amount till the full security deposit is recovered.
  - Security deposit will be recovered only from the running bills of the contract and no other mode of collecting SD such as SD in the form of instruments like BG, FD etc. shall be accepted towards Security Deposit.
  - Security Deposit shall be returned to the contractor after the physical completion of the work as certified by the competent authority. The competent authority shall normally be the authority who is competent to sign the contract. (*Regulation for tenders and contractors clause 16(1) of GCC*)

### Performance Guarantee (P.G.)

- The successful bidder should give a Performance Guarantee in the form of an irrecoverable bank guarantee amounting to 5% of the contract value.
- The Performance Guarantee should be furnished by the successful contractor after the letter of acceptance has been issued, but before signing of the agreement and should be valid upto expiry of the maintenance period.
- The agreement should normally be signed within 15 days from the submission of Performance Guarantee.
- Performance Guarantee shall be released after satisfactory completion of the work and maintenance period is over. The procedure for releasing should be same as for Security Deposit.
- Wherever the contracts are rescinded, the Security Deposit should be forfeited and the Performance Guarantee shall be encashed and the balance work should be got done separately.

- The balance work shall be got done independently without risk and cost of the original contractor.

### Acceptance of Tender

- An unqualified acceptance of a tender constitutes a binding contract until a formal agreement is constituted and in order to ensure this fact, the acceptance letter should be suitably worded. However, if the acceptance of a tender by Rly. is a conditional acceptance, it required the consent of the tenderer in writing before the binding contract takes place.

### Development Order

- At certain times contracts may have to be placed to promote indigenous development of new technology/techniques and these contracts are called Development Orders. In placement of such orders, the rules applicable normally can be relaxed and certain concessions may be granted, e.g.

- an advance commitment for placement of orders to meet the future demand for a period of 2/3 years, provided the rates/prices are reasonable.
- a commitment indicating progressively diminishing quantum of orders for a special period.

- The rate/price to be accepted will depend on factors like: -

- Nature of item/work
- Development cost involved

- Price preference evaluated on individual cases based on the merits of the case.

### Agreement

- The form of agreement, in case the tenders are invited, be the Tenders Form itself. The conditions of contract, specifications etc. may be embodied in the Agreement form or may be annexed thereto, or may be provided that they are readily accessible to the contractor, be merely referred to therein. On behalf of the contractor, the signature of only such person/persons as are competent to bind him legally shall be accepted on a contract.
- While executing an agreement the following should be kept in view:
  - No authority can enter into contract beyond the limits of its financial powers
  - Subject to restrictions/limitations imposed by GM, the power vested with GM

may be delegated to subordinate authorities.

- Contracts can be signed by only such authorities as have been empowered to do so vide Appendix II to the Indian Rly. Code for the Stores Department.

- Agreement for girders, structural works, rolling stock and other like materials which involved manufacture will come under 'Works' category and not under "Stores".

### Execution of Contract

- No contractor is permitted to commence work until the relevant contract/Work Order has been signed by the parties competent to do so.

- In extreme urgency, e.g. to protect/safeguard life/property, to repair damages caused by 'act of God', violation of this rule may be permitted as an exception provided, if circumstances permit, some form of written contract/at least agreed statement of rates to be paid should be prepared prior to commencement of work.

- In other exceptional but less emergent cases in which commencement of work/supply can not be postponed till the preparation and sanction of the contract document, prior consultation with FA&CAO is necessary.

- In all cases of departure from normal procedure the completion and execution of the main contract should be proceeded with expeditiously.

### Agreement and Work Order and related Register

- As soon as possible after the acceptance of tenders, the successful tenderers should be called upon to furnish the required security and to sign the formal Agreement/Works Order.

- For Zone Contract :- Separate Work Orders are issued for each specified work under Agreement

- For Contracts for Specific Works:- the contract document required to be executed by the accepted tenderer shall be either Agreement or Work Order

- An Agreement / Work Order Register to be maintained in the form E.12.63 to record all Work Orders / Agreements executed against a tender.

### Advances to Contractors

- Executive engineers should see that no payment are made except for work actually done and should normally abstain himself from making advances to contractor.
- General Manger is empowered to sanction advances to contractors in exceptional circumstances, not exceeding Rs.2 lakhs, subject to following conditions:
  - That a contractor does not receive advances for different works from different offices.
  - That arrangements are made with Accounts Officer for proper accounts being kept with regard to these advances.
  - That all precautionary measures are taken to secure Government from the possibility of loss and for preventing the system becoming more general or continuing longer than that may be absolutely necessary for the progress of the work.

### Variation of Contract Conditions

- The power to vary the terms of a contract lies only with actual parties thereto. The contractor and his sureties, if any, must, therefore, be consenting parties to all variations which should be the subject of a subsidiary agreement stating what is to be varied and what will remain unchanged in the original contract. The drafting of this agreement should be the subject of careful scrutiny to ensure that the conditions, specifications etc. of the main contract are adequate for being applicable to the variation or that letter is made self sufficient in these respects. Such subsidiary agreements should be regarded as fresh contracts and entered into before effect is given to the variation.
- Different sorts of variations of contract conditions are:
  - Variation of the conditions of contract
  - Variation of rates or Items
  - Variation of quantities of any Items.

### Deletion or Insertion of Items:

- All the variations should be approved and should be limited so as not to completely change the scope, character and purpose of the original contract.

### Time Limitation

- In terms of General Conditions of Control (GCC) subject to any requirement in the contract as to completion of any portion/portions of the works before completion of the whole, the contractor shall fully and finally complete the whole of the works comprised in the contract, with such modifications as directed by the Engineers, if any, by the date entered into the contract, provided that, if any, modifications have been ordered which in the opinion of an Engineer, have materially increased the magnitude of work, then such extension of the contractual date of completion may be granted as shall appear to the Engineer to be reasonable in the circumstances provided, moreover that the contractor shall be responsible for requesting such extension of date as he may consider necessary as soon as a cause thereof shall arise and in any case not less than one month before the expiry of the original date fixed for completion of the works.

### Time Extension:

- In terms of GCC if the construction is delayed at any time in progress of the works by any act or neglect of Rly's employees or any other contractor employed by Rly or by strike/lock-outs/fire/casual delayed transportation, unavoidable casualties beyond his control, or by delay authorised by the Engineer pending arbitration, then time of completion of the works may be extended for such reasonable time as the Rly. Engineer on behalf of the Rly. may decide.
- As per provision of GCC 1969, the Railway may grant such extension/extensions of the completion date as may be considered reasonable in the event of failures or delays by the Rly.
  - to hand over to the contractor the possession of the site necessary for execution of works, or
  - to give necessary drawings/instruction etc.
  - any other delay caused by Rly due to any cause whatsoever.

### Time to be the Essence of Contract

- Time is deemed to be the essence of contract as per provision of General Conditions of Contract, and, therefore, it is necessary for the



contractor to complete the work within the stipulated period.

### **Extension of Completion Period:**

- The extension of completion period should be sanctioned at the discretion of the authority who signed the original contract, provided that :
  - The rate in contract was not accepted against other lower tenders in consideration of the date of completion
  - The authority concerned is satisfied that the delay will not cause any loss/damage
  - In cases it does not satisfy any/both the above conditions such sanction shall be given only in consultation with the FA&CAO, after taking legal advice, if necessary.
  - The opinion of Rly. Competent authority as to whether the ground shown for extension is reasonable or not will be final and contractor has no authority to challenge except questioning.
  - Govt. interest must be safeguarded during grant of extension of completion.
  - When the period fixed for completion is about to expire, the question of granting extension may be considered either at the instance of contractor or Rly. Deptt. Or both.

### **Liquidated Damages (LD)**

- In terms of para 1267-e and general conditions of contract , if the contractor fails to complete the works within the time prescribed, the Railway shall, if satisfied that the works can not be completed by the contractor within a reasonably short time thereafter, be entitled, to recover liquidated damages. Such recovery shall be only a reasonable compensation not exceeding the amount so named or stipulated in the contract. The compensation shall be computed on the basis of actual loss sustained by the Railway or the inconvenience that has been occasioned by the failure of the contractor even though no loss has actually been caused.
- It would be necessary for the Rly. to serve on contractor a notice of the intention to recover liquidated damages as required under the Contract Act.
- The decision for recovery of LD should not be taken at a level lower than the authority who signed the contract.

### **Recession of Contract**

- General conditions of Contract contain certain clauses in regard to determination and

recession of contract, forfeiture of security deposit and execution of work through another agency.

- When the contractor has rendered himself liable to action under these clauses, the Competent Authority has the power to :
  - Determine or rescind the contract. Upon such recession, entire security Deposit shall stand forfeited.
  - Employ labor paid by the department to carry out such work. In such event, extra cost, if any, on completion, shall be recovered from the Original Contractor.
  - Decision regarding the termination of contract and execution of the balance work at the risk and cost of the contractor may be taken by Executive but it should not be taken at a level lower than the authority who signed the contract.
  - To measure up the work of the contractor and give it to another contractor at risk and cost of the Original Contractor, and extra cost, if any, in this case shall also be recovered from the defaulting contractor.
  - Proper notices are required to be served before taking any such action under these clauses.
  - No credit is allowed to the contractor in case amount spent is less than the amount payable.

### **Escalation Clause**

- Escalation clause provides for reimbursement of price escalation caused due to increase in the cost of labor, material and during the progress of work such increase is not attributable to delays on the part of the contractors.
- Option of this clause includes both increase & decrease in the price.
- In case time extension granted imposing compensation the price escalation for the period covered under such extension would not be payable.
- Escalation Clause is evidently based on the principle that one who seeks equity must do equity.
- In cases where contractor has by his own default allowed the contract to be extended while market was rising, he should not be allowed to get the benefit of price escalation for such delayed period of his own default.

- Escalation Clause is not applicable where the stipulated period of completion is 12 months or less than 12 months.
- The value of work done during each quarter should not include cost of material supplied by the Govt. of fixed - issue-rate.
- The cost of work on which escalation is payable should be reckoned as not exceeding 75% (in some cases 85%).
- Price escalation on steel, cement etc. procured by the contractor out of secured advance should be restricted upto the date of procurement only.

### Warranty Clause

- The terms of contract for purchase of goods/stores/articles should include a warranty clause wherein the contractor/seller guarantees that the goods/stores/articles would continue to conform to the description and for an agreed period; otherwise the goods shall be replaced or cost refunded as per agreed.

### Arbitration

- In the event of disputes between the contractor and Railway in a contract the matter may be referred to arbitration as provided for in the conditions of contract. When, however, a contractor has received all payments in respect of all his bonafide claims and has given a 'No Claim' certificate, but puts in fresh claims and demands a reference to arbitration, the Railway Administration will be justified in refusing arbitration in such cases. It is, however, advisable to take legal opinion before finally rejecting the demand for arbitration.

### Conclusions

- To safeguard Railways interest all precaution any contractual clauses are to be inserted in the Agreement/Contracts.

### Audit Points

- In case of a proposal for abandonment of assets, it should be seen whether the works are proposed for abandonment soon after construction due to having lost their utility or not having served the purpose for which they were designed.
- In case of abandonment of 'assets write back adjustments' it should be seen that the original cost of the assets at debit to Capital, Development Fund has been written back from Capital/Development Fund to Depreciation

Reserve Fund. It should also be seen that reasonable provision is made for credit in account of released materials.

- When there is a proposal for construction of Assisted Siding, it is to be seen whether the revenue expected is sufficient to cover interest and maintenance charges etc.
  - In case of apportionment of expenditure and levy of Departmental charges it should be seen that apportionment of expenditure between the Railway and applicant is strictly as per provisions of para 1826E and Departmental charges are levied, where necessary.
  - In case of provision for periodical inspection and levy of inspection charges it should be seen that there is provision of periodical inspection of the siding by the railway in the estimate and agreement.
  - Provision for office and residential accommodation for Railway staff posted at the siding may be necessary directly as a result of providing the facility to the applicant. In such cases there should be provisions for recovery of repair and maintenance charges of these structures as an additional charge.
  - To locate avoidable lapses, in earlier estimate, resulting in an additional avoidable expenditure the provisions in the revised estimate may be scrutinised especially in respect of increase in quantity and addition of new items with a view to find out that they do not disclose want of reasonable precautions in the first instance.
  - It may be seen whether any expenditure already incurred in a work in an advanced state does not become a loss due to revision of the plan or change in the method of execution.
  - A comparison of revised estimates with original estimates, detailed estimates with abstract estimates may disclose palpable cases of Material Modifications. The instances of the cases of material modifications given in Para 1110E need not be considered exhaustive. In terms of para 1109E execution of work involving Material Modification cannot be started without prior approval of Material Modification.
- ### Contractors' Ledger
- Posting of the amount of deductions.
  - The correctness of the postings of the amount of deductions from the audited bills to the contractors ledger should be checked.

- To ensure correct posting by cross checking.
- Advances to contractors
- If advances have been made to contractors it should be seen that there is proper sanction and sufficient security against loss to the railway.
- To ensure existence of proper sanction and sufficient security.
- Posting and balancing
- It should be seen that contractors' ledger is posted as bills are paid and that the accounts are closed and balanced monthly under the initial of a gazetted officer.
- To ensure prompt posting and proper monthly balancing
- Delay in receipt of subsequent bills.
- The delay in receipt of subsequent bill may be due to stoppage of work for want of funds or late receipt of special class material or to a dispute or objections raised by the contractor as to rates etc. The reasons for the delay need be scrutinised and if important followed up.
- To ensure that subsequent payments are not made at the higher rate.
- Closing of contractors' Accounts.
- It is to be seen that contractors' accounts are closed without delay on the completion of the contract. The account should be reviewed to see that all amounts due from him have been recovered before closing.
- To ensure recovery of all amounts due to the railway.

### Contracts

- **Observance of general policy:** While conducting audit of contracts it should be borne in mind that it is the general policy of Government that tenders should be invited and dealt with in a public manner, contract should be executed on behalf of President of India by an authority competent to do so under the rules and the fundamental principles laid down by the Government for guidance of the authorities competent to enter into contracts and agreements. To ensure that the broad-based general policy of the Government is followed by the authorities entering into contracts and agreements.
- **Publicity for tenders and response:** It should be seen that proper arrangements exist for giving due publicity for tenders invited and the response is quite good. Where the response

for tenders is poor, the reasons thereof should be examined and remedial measures may be suggested of the Railway Administration to improve the position.

- **Reasonableness and Competitiveness of rates:** It should be seen that before acceptance of the tendered rates, their reasonableness and competitiveness have been established. To ensure that the rates accepted are reasonable and competitive.

- **Finalisation and acceptance:** It should be seen that there is no undue delay in finalisation of tenders and communication of its acceptance to the tenderers.

- **Recording of the reason for non acceptance of lowest tender:** It should be seen that the reasons for not accepting the lowest tender have been duly recorded. To see that there is adequate reason for non-acceptance of lowest tender.

- **Increase in rates or exgratia payment:** Except in exceptional cases, an increase in rates or exgratia payment is not allowed after acceptance of tender. Frequent increase in rates and frequent exgratia payments should be subjects of scrutiny. Increase in rates, where agreed to is definitely committed in writing. Increase in rates and ex-gratia payments if too frequently approved, render the principle of calling for tenders more or less nugatory and as such these cases should be scrutinised in audit judiciously. If increase in rates, is not committed in writing, sometimes it might lead to costly litigations.

- **Form of agreement:** It should be seen that neither there is important change in the standard form of contract nor new types of contract documents used. To ensure that standard contract documents are used without any important change and no new types of contract documents used. Cases of deviations are to be reported to C&AG of India.

- **Splitting up of the agreements:** It should be seen that agreements are not deliberately or inadvertently split up so as to evade the necessity of obtaining the sanction of higher authority to the award of the contract. To ensure that there is no evasion of sanction of higher authority by splitting up of the agreement.

- **Comparison of contracts with estimates:** It should be seen that the contracts are in

conformity with the estimates and also how the estimates have been framed keeping in view the various specification drawings etc. To ensure that contracts are in conformity with the provisions in the estimates.

- **Terms of contracts:** It should be seen that the terms of the contracts are precise and definite leaving no room for ambiguity or misconstruction therein. To ensure that terms of the contract are definite and clear.
- **Work orders:** For small works, no agreements are executed and instead, work orders are issued. It should be seen that the rates allowed for these small works are not in excess of the schedule of rates of a particular division. To ensure that the rates allowed in the work orders are as per schedule at rates.
- **Lump sum contracts:** Lump sum contracts are to be subjected to checks as(are) practicable. There should an explicit provision for reduction in the event of any item of work being omitted or replaced by less costly design .The form employed is of a type that has been approved by higher authority and accepted on legal advice. To ensure existence of explicit provision for reduction and use of approved form.
- **Terms and conditions for supply of railway material:** It should be seen that the terms and conditions for supply of railway material required to be used by the contractor are explicitly stated in the contract.
- **Waiver of penalties:** It should be seen that the penalties provided for in the contract are not waived where the railway has suffered definitely ascertainable loss/inconvenience due to failure of the contractor to complete the work or supply the material within the stipulated time without recording adequate ground for waiver. To ensure non-waiver of penalties in cases of definite loss to the Railway due to failure of the contractor.
- **Agreements providing for issue of passes to contractors:** Agreements providing for issue of passes to the contractors should be scrutinised to see that there has not been an excessive number of passes compared with the value of work to be done. To ensure that provision for passes in the contract is in conformity with the value of work to be executed.

## Vouchers of Payment

- **Form and arithmetical accuracy:** It should be seen that the vouchers have been prepared in prescribed form and they are arithmetically correct. These should also be 'original'. To ensure that each voucher is the original and in prescribed form. The arithmetical calculations are correct.
- **Currency of the claim, period to which relate and allocation:** It is to be seen that the voucher is for a current and specific claim and the period to which the payment relates and the allocation of the charges are clearly shown on voucher. The correctness of the allocation should also be verified. To ensure that the claim is current and specific and the charge is correctly classified.
- **Voucher:** It is to be seen whether the voucher has been properly followed up and headed and that the expenditure recorded has received. The sanction either special or general of the authority competent to sanction it. It should also bear a note about payment in cash or by cheque. It should be signed by the officer responsible for accuracy and such signature should not be by stamp or in pencil. To ensure proper filling up of the voucher and existence of proper sanction and endorsement about the mode of payment. It is also to be seen whether the total of each bill as well as of the amount paid is expressed in words as well as in figures. There is no erasure or alteration of figures. Corrections, if any ,are properly done under initial of a responsible officer and corrections in the total or in the amount paid are attested by both payee and drawer of the bill. To ensure the following correct procedure to avoid the chance of fraudulent excess payment.
- **Nature of change:** It should be seen that the nature of change is such as may rightly be made against Government and for the work of service to which it is debited. To ensure that the amount paid is a legitimate charge against Government.
- **Rates –reasonableness of:** It should be seen that the rates paid are not much higher than those usually paid in the locality for similar services. To ensure reasonableness of the rates.
- **Exhibition of quantity and details of outlay:** It should be seen that the outlay is fully detailed and quantities are always given of work done

and material supplied. To ensure existence of full details of outlay and quantities paid for.

- **Note about place of payment and person before whom payment is to be made:** It should be seen that the place of payment and name of the officer or subordinate before whom payment is to be made are given in the voucher. The signature of the witness must be dated. To ensure existence of proper and reliable arrangement for witnessing of payment.

- **Receipt of payment:** It should be seen that the vouchers bear a formal receipt of the person in whose favour the bill is drawn and is duly stamped if the gross amount exceeds Rs 500; and the sum acknowledged is written in words as well as in figures. The signature of the payee must be dated. The receipt should be for the full amount when a bill is satisfied partly by stores supplied. To ensure existence of proper receipt of payment.

- **Cancellation of voucher proper:** It should be seen that each voucher is cancelled in some efficient way and receipt stamps are defaced so as to render them unusable, to guard against the possibility of the voucher being passed for payment for the second time.

- **Cancellation of supporting documents:** The supporting documents of bill are required to be defaced by showing the particulars of the bills on which charges due have actually been passed to prevent them from being passed for the second time towards payment. Audit should see that the supporting documents are invariably cancelled by showing particulars of the bill passed. To ensure following of the procedure of cancellation of supporting documents of the bills. This is necessary to guard against the possibility of preparation of a second bill against same documents.

- **Charges debitable to personal account:** If a charge is debitable to the personal account of a contractor, employee or other individual or is recoverable from him under any rule or order, it is recorded as such on the initial record and in a prescribed account. To ensure following of the correct procedure for watching subsequent recovery.

- **Breach of canons of financial propriety:** It is to be seen that the expenditure does not involve a violation of the standards of financial propriety. To ensure that the broad principles of

orthodox finance are borne in mind by the executive officers and also by the sanctioning authorities.

- **Variation in expenditure:** Completion Reports of works which show appreciable variation in expenditure compared with estimates should be specially noted with a view to seeing whether, judged as a whole, there is any slackening of efforts in regard to the efficiency, and accuracy in the preparation of estimates. If the results are really important, a special report may be made to the C&AG of India. To find out cases of inefficiency and inaccuracy in the preparation of estimates as it very often leads to avoidable extra-expenditure of sums of larger magnitude.

- **Possible Material Modification:** The total expenditure on the works as shown in the completion report should be compared with that booked in the works register and details verified to see whether there have been any material modifications requiring the sanction of higher authorities. To ensure that there are no hidden cases of material modifications requiring sanction of the authority sanctioning the work.

- **Allocation:** It is to be seen that the allocation of expenditure as between Capital, Depreciation Reserve Fund, Development Fund, Open Line works (Revenue) Capital Fund in respect of mixed works has been correctly made. To ensure correct allocation of works expenditure

- **Joint works completion of adjustments:** Where the works are partly debitable to the Railway and partly to other Railways/Government Departments/Private parties proper shares are adjusted before the accounts of the works are closed. To ensure completion of adjustment of the cost of joint works.

- **Financial Justification:** In the case of works which are financially justified at the time they were sanctioned, whether the justification still holds good despite an increase in the total expenditure in completing the work. To examine the validity or the genuineness of the financial justification, originally prepared.

- **Readjustment of value of excess materials:** It should be seen that all materials charged to the work or works but not used up have been resumed to stores or transferred elsewhere and the accounts of the work credited with their

value. To ensure completion of the adjustment/readjustment of value of excess materials.

- **Adjustment of value of released materials:** It should be seen that credit for released materials provided for in the estimate has been adjusted against the work concerned. To ensure completion of adjustment of value of materials released from work.
- **Form and competency of sanction:** It should be seen that completion Report has been prepared in the prescribed form and sanctioned by competent authority. To ensure use of correct Form and existence of competent sanction.
- **Disposal of objections to expenditure:** It should be seen that objections to expenditure such as excesses over estimates are not left unregularised for unduly long periods with the intention of regularising them through completion Reports. To ensure prompt settlement regularisation of objections to expenditure
- **Explanation for variation:** It should be seen that important differences between the sanctioned amounts and actual expenditure have been suitably explained. To ensure existence of proper explanation for important differences between sanctioned provision and actuals.
- **Recording in works Register:** It should be seen that the completion reports have been noted in the Register of works and verified by the Accounts Department concerned. To ensure recording and associated Finance verification.
- **Work for use of an outside body:** It should be seen that when the work is for use of an outside body such as the construction of assisted sidings, interest and maintenance charges are recovered not from the date of sanction of completion report but from the date the work was physically completed and brought into use. To ensure correct application of date from which interest and maintenance charges shall be due for recovery.

### Material-at-site-Return

- **Opening Balance:** The opening balance of this quarterly return should be checked with the closing balance of the return of earlier quarter. To see that balances brought forward from earlier quarter are correct.

- **Receipt of materials:** The receipts during the period covered by returns should be checked with the relevant issue notes, the summary of stores, adjustment memo and other receipts. To ensure the correctness of the accountal and exhibition of actual receipts.

- **To reasonableness of issues:** The reasonableness of the issues during the period covered by the return should be checked with reference to the relevant sanctioned estimate, and the progress of work reported during the period. To ensure reasonableness of issues.

- **Credit for returned stores and stores transferred elsewhere:** As regards materials returned to stores depot or transferred elsewhere, the correctness of credits to site accounts should be checked with the relevant advice of returned stores or adjustment memo. To ensure correct accountal of credits to site accounts.

- **Arithmetical accuracy:** The arithmetical accuracy of the returns should be checked. To ensure arithmetical correctness.

- **Periodicity of physical verification of stock:** The authority in executive charge of a particular work should arrange for physical verification of stores at least once in a year. The Accounts Department should, in addition physically verify the stores once in a year. The executive officer and the Accounts stock verifiers should record a certificate to the effect of completion of the verification. Audit should see that in stock verification, prescribed periodicity is followed. To ensure observance of correct periodicity of stock verification by Accounts and Execution.

- **Sanction of Deposit works:** It should be seen that the estimate of the deposit work has been got accepted by the parties ordering the work before submission to the competent authority for sanction. In case of works which are required to be maintained by railway after completion the acceptance of the department, local body, private firms or individuals, ordering the work, has obtained for the recurring expenditure that is likely to be incurred on repair maintenance etc. To ensure that there is acceptance of the parties (departments, local bodies, private firms or individuals) concerned toward initial and recurring cost.

- **Commencement of deposit work:** No work asked for by another government department

should be commenced till a detailed estimate for the same has been accepted by the department concerned and sanctioned by competent railway authority. No work asked for by local bodies, private individuals etc. should be commenced till a detailed estimate for the same has been sanctioned by competent railway authority and the estimated cost thereof deposited with the railway. It should be seen that this rule has been followed strictly. To ensure, that rules regarding acceptance and depositing of the cost has been followed.

- **Accountal of deposits:** It should be seen that the amount deposited by the local bodies, private individuals etc, towards the cost to be borne by them has been credited to "Deposit-Miscellaneous. To ensure correct accounts of the deposits.

- **Railway freights and carriage charges of materials:** It should be seen that the estimates of works for other departments, local bodies, private individuals etc include freight and carriage charges of materials, proposed to be used in the works, at public tariff rate. To ensure that the benefit of concessional rates applicable to railway material is not allowed.

- **Departmental Charges – levy of:** It should be seen that estimates of works for other departments, local bodies, private individuals provide for departmental charges at prescribed rates (Rule 1137 E). When work is undertaken by the Engineering Department of a railway for outside parties including other railways government departments, public bodies (e.g, Municipalities, port Trust etc) and employees of the railway, departmental charges should be levied to cover the cost of tools and plants and of establishment supervision. The charges leviable will be 12.5 percent on the total cost of the work (wages and materials) including cost of land (exception Rate 1829 E provides for non levy of departmental charges on cost of land required for construction of assisted siding, if the land required for the siding is acquired by the applicant at his own expense and made over to the railway). To ensure correct levy of departmental charges.

- **Departmental Charges Remission of:** The General Manager may, at his discretion, waive wholly or partially the recovery of departmental charges leviable under rule 1137E. It should be

seen in audit whether the Railway gains some advantage, by such remission (This advantage may not necessarily be financial). The reasons for remission are recorded in writing. The remission has got necessary finance concurrence. The remission has not been allowed on the plea of non incurrance of extra charges on account of tools and plant and establishment supervision. To ensure that remissions are justified and are in accordance with rules as above.

- **Register of works for Deposit Works:** It should be seen that the expenditure booked is not in excess of deposits and there is arrangement for monthly reconciliation of the Register with "Deposit Miscellaneous" and a certificate of reconciliation is recorded in the Register of Works. To ensure that expenditure in excess of deposit has not been incurred and rule of reconciliation of the Register of works with Deposit-Miscellaneous is followed strictly.

### ***Auditing Railway Construction expenditure***

The basic objectives of auditing are: -

- To see that expenditure has been incurred with due regard to the broad and general principles of financial propriety
- To see that the expenditure falls within the scope of a grant or an Appropriation specified in the schedule to an Appropriation Act and that is within the amount of that Grant or Appropriation
- To satisfy itself about the regularity of the expenditure
- To see that each item of expenditure is covered by the sanction of the authority competent to sanction it
- To satisfy itself about the propriety and justification of the expenditure. 'Propriety Audit' extends beyond the formality of the expenditure to its wisdom, faithfulness and economy.
- Assessment of three Es i.e., Economy, Efficiency and Effectiveness of the outlay.

### ***Auditing a project***

- Besides the scrutiny of individual transactions for detecting cases of improper, extravagant, wasteful or uneconomical expenditure an important function of audit is to examine how far the agency or authority whose transactions are under audit is adequately

discharging its financial responsibilities in regard to the various schemes undertaken by it. Since past few decades the pattern of governmental expenditure has undergone a vital change in the context of various developmental programmes and welfare activities. It is, therefore, essential that expenditure incurred on different schemes should be examined in audit to ascertain whether such schemes are being executed and their operations conducted economically and efficiently and whether these are producing the results expected out of the use of available resources. Hence the technique of audit has also been re-oriented since last few decades.

- A comparative review of the Plan/Scheme/Project is now conducted with a view to analysing how far the ultimate purpose or objects of expenditure has been achieved. This method of audit is known as Performance Audit. Performance audit is concerned with the audit of economy, efficiency and effectiveness and embraces:

- Audit of the economy of administrative activities in accordance with sound administrative principles and practices, and management policies;
- Audit of the efficiency of utilisation of human, financial and other resources, including examination of information systems, performance measures and monitoring arrangements, and procedures followed by audited entities for remedying identified deficiencies; and
- Audit of the effectiveness of performance in relation to the achievement of the objectives of the audited entity, and audit of the actual impact of activities compared with the intended impact.

- Performance Auditing is an independent assessment or examination of the extent to which an entity, programme or organisation operates efficiently and effectively, with due regard to economy.

- In practice, there can be an overlap between regularity and performance auditing, and in such cases, classification of a particular audit will depend on the primary purpose of that audit. Regularity audit embraces attestation of financial accountability involving expression of opinion on financial statements, audit of financial systems and transactions, including an

evaluation of compliance with applicable statutes and regulations, audit of internal control and internal audit functions and audit of probity and propriety of administrative decisions taken within the audited entity.

### **Economy**

Economy is concerned with minimising the cost of resources acquired or used having regard to quality.

- It is seen
  - Whether the sanctioning and spending authorities have observed economy
  - Whether money is spent as per the provision in the estimate of the project/programme/scheme and that the estimated cost itself is reasonable and rational
  - The approach is not too conservative and the expenditure is just to suit the occasion as prudence would demand
  - The rate and scale of expenditure is justified as per the circumstances

### **Efficiency**

Efficiency is the relationship between the output of the goods or services or other results and the resources used to produce them. It is seen during efficiency audit

- Whether technical estimates or detailed programme and cost schedules are being framed and are adhered to if not for what reason and with what effect
- Whether there have been any serious avoidable delays in the progress of works or schemes, due to inefficient planning, handling and coordination of the work, resulting in increase in the total cost of the scheme or any loss of revenue due to delayed execution or holding up of the connected scheme
- Whether there has been any wasteful expenditure including that resulting from lack of coordination amongst several aspects of the scheme and in between various agencies
- Whether there has been any waste due to some facilities providing unnecessary or going unutilised
- Whether there have been any serious or recurring losses



- Whether the performance/cost compares well with the result obtained in respect of similar schemes in other fields in the public sectors.
- Audit should do the cost benefit analysis to see whether the value for money is returned

### **Effectiveness**

Effectiveness is concerned with the relationship between the intended results and the actual results of a scheme, project or programme. It is to see: -

- How far a particular activity is producing results expected out of it
- How far the physical targets have been achieved within the estimated time
- How far the final purpose or objects of expenditure have been achieved

### **Scope and Standard of Field Audit**

- It is neither practicable nor desirable to conduct Review of Projects on predetermined lines as schemes differ in their concepts, techniques of performance, nature of objectives etc. Information available for analysis will also differ. The selection of projects/schemes for review should therefore be done with utmost care after making a preliminary study taking into account the various factors apart from the financial outlay involved
- At the stage of preliminary study areas of investigations are identified and methods of further investigation determined. After selection of the projects/schemes for review an audit programme is framed for detailed investigation and for collection of necessary data
- A specific Audit plan should be chalked in advance indicating the guidelines for investigations, making out the offices/field units to be visited. Necessary formats and questionnaires should also be prepared for collection of important data relating to various aspects of the scheme
- In respect of Central Reviews i.e., reviews selected by the Comptroller and Auditor General of India the detailed guidelines in respect of each review are issued by Headquarters

### **Scope and Standard for Field Audit**

- While conducting review the approach of audit should be systematic, methodical, logical and rational
- The review should commence with the in-depth study of file of Administrative Departments and Heads of the Departments
- The next stage is carrying out the studies and collecting information from field units
- The review of project/scheme is aimed at examination of systems, procedures, planning, implementation and operational performance of project/programme/scheme etc, and bringing out, inter alia, weaknesses, deficiencies and bottlenecks of various types
- The review should cover mainly the economic aspect. Still it has to be borne in mind that the Railways are an important instrument of economic and industrial development of backward areas. The review should thus cover the socio-economic aspects also where applicable

### **Guidelines for Audit**

Audit should see-

- whether the objectives of the project/scheme/organisation have been clearly defined and are in conformity with the policies and decision of the Government
- whether the programmes have been drawn up in accordance with these objectives and are being implemented by specific as well as defined procedures
- whether a good monitoring/management information system (MIS) exists for collecting reliable data and progress. Reports on implementation of policies and programmes, weaknesses and lapses, if any, should be identified
- Whether the performance is, prima facie, appearing to be less than efficient, the reason therefor should be ascertained and examined in detail. Where performance indicators or efficiency norms are available. The performance should be compared with them to evaluate efficiency
- Whether technical estimates or detailed programmes and cost schedules are being framed and adhered to. If not, whether there are

adequate reasons for excesses, delays etc. or these are occasioned by inefficient handling, wastages etc or due to indifferent preparation of original estimates

- Whether there have been any serious avoidable delays in the progress of works or scheme due to inefficient planning, handling and coordination of the work, resulting in increase in the total cost of the scheme or any loss of revenue due to delayed execution or holding up of the connected schemes
- Whether there has been any wasteful expenditure including that resulting from lack of coordination amongst the several aspects of the scheme or in between different authorities
- Whether there have been any serious or recurring losses and whether there has been waste due to some facilities already created proving unnecessary or remaining unutilised
- Whether performance/cost compares well with the result obtained in respect of similar schemes in other fields in the public sector
- Whether modern techniques such as Critical Path Method (CPM) and Programme Evaluation & Review Techniques (PERT) etc. exist in the project. Whether these techniques are put to use
- Whether there are guidelines for holding inventories, yardsticks in respect of inputs and outputs, and system of review of utilisation of plant capacity & manpower
- Whether the returns anticipated are actually accruing. The benefits realised should be evaluated comparing the actual cost benefit ratio with the projections made at the sanctioning stage itself;

Besides these, audit should also consider the following points during audit-

- The sample size for detailed check should be taken in such a way that it is adequate and fairly representative of the whole project so that audit findings are reasonably reliable;
- In assessing whether the returns anticipated are actually accruing, the benefits realised should be evaluated comparing the actual cost benefit ratio with the projections made at the sanctioning stage itself.
- In assessing the achievements of socio-economic objectives in major projects/schemes

like new line construction in backward areas, the benefits realised by the economy as a whole with those existing prior to the scheme should be compared;

- In attempting reviews, the emphasis should be on quality rather than on lengthy narrations.

### **Also Note**

- In respect of physical and financial progress, target date of completion, amount of expenditure incurred, the figures exhibited in MCDO, PCDO, Quarterly progress report for works, General Manager's Annual Narrative Report etc. can be adopted. About receipt and expenditure the Accounts figures may be treated as valid, but if it differs widely with the executive the figures should be got reconciled in between the two sets of records.
- Ensure furnishing in the review report the number of units test checked and out of how many. In how many units particular type of defects / weaknesses / irregularities / losses have been noticed.
- It is sometimes necessary to depend on the statistical data about coverage/yield etc. Adopt the figures published by the statistical department of the Railways or Annual Statistical Statements issued by the Railway Board.
- The figures adopted should be tested and cross-checked to ensure its correctness and reliability.
- Copies of important records like letter, reports etc. shall be required in support of the comments in the review report as documentary evidence. These must be collected during field audit
- If any statement is prepared by audit party on the basis of various records of Executive or Accounts these are to be got vetted by the Executive/Accounts to avoid any future denial/disagreement/complications
- Whenever the causes of shortfall/deficiency/ are not on record these should be collected raising queries in writing and obtaining reply thereto. The reply can be used as documentary evidence.
- Lay more emphasis on collection and analysis of facts and figures rather than raising queries (through review report).
- The review report should be drafted after careful, detailed and analytical dissection of the findings of investigations made during review

and as such mere copying of Departmental Reports may be avoided.

- The layout of the review report must have "Highlights" of the important comments with money value, if any, below the 'Introduction', 'Scope of Audit' & 'Organisational Set-up'.
- If the report relates to a single project a chronological sequence of events may be prepared and enclosed with the Review Report in addition to the list of keys (which is a must).
- The amount of loss/infructuous expenditure/idle investment/frauds etc. may be summarised in concluding sub-paragraph.

### ***Audit of Construction Division***

- MUSTER SHEET
- REGISTER OF WAGES
- MEASUREMENT BOOK
- CONTRACTOR'S BILLS
- CONTRACTOR'S LEDGER
- BILLS FOR STORES PURCHASED
- CASH IMPREST ACCOUNT
- CASH RECEIPT
- CASH REMITTANCE
- MATERIAL-AT-SITE-ACCOUNT
- TOOLS AND PLANT ACCOUNT
- TRANSFER DOCUMENTS
- REGISTER OF WORKS
- REVENUE ACCOUNTS

### ***Other Records to be seen in Railway Construction***

- ABSTRACT ESTIMATES
- ADMINISTRATIVE APPROVAL
- DETAILED ESTIMATES
- TECHNICAL SANCTION
- NOTICE INVITING TENDER (NIT)
- COMPARATIVE STATEMENT AND EVALUATION OF TENDERS
- TENDER DOCUMENTS
- BRIEFING NOTES
- ACCEPTING LETTER
- AGREEMENT
- TERMS AND CONDITIONS OF CONTRACT
- DEPOSIT ESTIMATES
- COMPLETION REPORT
- COMPLETION ESTIMATE

### ***Muster Roll***

- Muster portion
- The attendance has been properly checked by the Executive officer at least once a month
- Any alteration for correction in attendance or rate of pay or number of days has been properly attested by responsible officer. In case

of muster roll for temporary staff the engagement is covered by the proper sanction recorded in the 'Register of Sanctions' having limited currency

- To ensure that there has been no fake mustering and that there has been sanction to the engagements

### ***Labour Pay Sheet***

- **Labour Pay Sheet:** The labour strength should be compared with the sanctioned strength or the sanctioned provision in the authorisation roll. Chief Engineer may be requested to give a statement of distribution of labour staff by each district and the total strength of each district should be compared with that in the Labour Pay Sheet. Comparison of the number of workmen employed per km with the number employed on other section of the line or on the Railways may disclose unjustifiable disparities. Where labour is directly charged to works the progress, the state of work should be scrutinised to see that the strength of labour force is prima facie justified. Departmental labour is not employed on works required to be done by contractor labour and when departmental labour is lent to contractor a proper record is maintained and the contractor debited with the necessary charges. To ensure that there is no excess employment and labour strength is justified and economically utilised

- Arithmetical accuracy of the amount charged for each man should also be checked and total of each page traced into the summary. The amount of each labour pay sheet should be traced into the abstract of bills passed and Allocation Registers. Correctness and allocation should be checked and it has to be seen that payments have been witnessed by responsible official.

- To ensure that there is no excess payment of wages to the labour and wages have been correctly allocated

- **Expenditure:** The expenditure should be compared with the sanctioned estimate and excesses traced into Objectionable Item Register (O. I. Register). Where expenditure has been incurred without preparation and sanction of estimate, it should be seen that these are included in the O. I. Register. If the works have been started on the authority of Urgency Certificate whether the work falls under the

categories prescribed for sanction of Urgency Certificates. Where large no. of works have been taken up for execution before estimates are prepared and sanctioned, it would be seen that sufficient action has been taken by the Accounts Department to put a stop to the irregular practice. Cases of Material Modifications should be found out and it should be seen whether works involving Material Modification has been taken up only after sanction of the competent authority. To ensure that expenditure incurred without sanctioned estimate or in excess of sanctioned estimate is held under objection.

- **Posting of audited bills:** Posting of audited bills should be traced into Works Register. To ensure accuracy of postings.
- **Reconciliation with General Books:** The result of reconciliation done should be examined. To see that early action is taken to trace and clear all discrepancies

### **Register of Works**

- **Expenditure:** Expenditure incurred in the absence of regular sanction to a work not provided for in the budget of the year should be scrutinised. To see whether it involves a new service not contemplated in the budget.
- **Physical completion of work and closure of accounts:** It should be seen that adequate control is exercised by the Railway Administration over the closure of the accounts and preparation of completion reports of works and that there is no delay in closing accounts of works after physical completion. Delay in adjustment of the cost of released materials and delay in clearance of material-at-site account may be the reasons for delay in closing of accounts. This should be investigated. To ensure that work accounts are closed promptly and nothing remains outstanding against contractors for recovery.
- **Budget allotment and actual expenditure:** Actual expenditure should be compared with budget allotment. To ensure that large variations are covered by explanation in the Appropriation Accounts and to enable any material modification occurring being spotted and commented upon, if needed.
- **Expenditure on works:** It is to be seen whether expenditure is proportionately progressive as against allotment and that no expenditure is incurred in regard to items not

included in the estimate. To locate the areas in which the budget provisions are likely to be exceeded and to detect cases of unsanctioned expenditure and even material modifications.

- **Expenditure on contingencies:** All items of expenditure under contingencies are to be scrutinised to see that they include only unforeseen expenditure. To ensure that no additional works, not provided in the estimate, are included under contingencies
- **Review of Divisional Officer:** It should be seen that the register is closed monthly and reviewed by a Divisional Officer. To ensure timely action for rectification/regularisation by the Divisional Officer.
- **Expenditure on replacement of asset:** See that the percentage of improvement element in the expenditure incurred during the year on replacement of the assets at the cost of Depreciation Reserve Fund has been correctly worked out and shown in the Block Account. To ensure correctness in arriving at the percentage of improvement element and its exhibition, separately, in Works Register.
- **Reconciliation between Executive and Accounts Works Registers:** It should be seen that the reconciliation between the two sets of registers are conducted monthly and all discrepancies are settled without delay. To ensure that the system of reconciliation is being followed regularly.
- **Irregular booking of expenditure:** The figures against column "up-to-date" should be scrutinised to see whether there is any minus figure indicating minus debit. Such figures are indicative of irregular booking. To ensure that there is no irregular booking of credit in the form of minus debit.

### **Estimates**

- **Propriety and justification of the work:** It should be seen that adequate return is expected on the expenditure proposed to incur. This may be either in the shape of enhanced revenue or of reduction of expenditure. In terms of Rule 201 of Indian Railway Financial Code - Volume I any expenditure other than that wholly chargeable to ordinary revenue or for improvements should be financially justified. To ensure that there is adequate return, Railway being a commercial undertaking of the Government.
- **Report accompanying the estimate:** The report accompanying the estimate should be

examined thoroughly understanding the nature, object and scope of the work. The correctness of incidence, classification and allocation of charges should be scrutinised. To ensure correctness of incidence and clarification and to see that expenditure is legitimately chargeable to Railway Funds.

- **Sanction:** The files or papers leading to the issuance of sanction should be looked into. To ensure existence of proper sanction.
- **Sanction of "Urgency Certificate":** It should be seen that the works are falling under the categories prescribed in Rule 1103(i)E. To ensure that no expenditure is incurred before sanction of "Urgency Certificate" and works are falling under the categories prescribed.

### **Measurement Book**

- **Accountal of Measurement Books (M.B.):** It should be seen whether all the MBs have been serially numbered and entered in a register. This register should contain the columns like Serial no. of the book, the name and designation of the person to whom issued, the date of issue and date of return. Thus the eventual return of the book to the divisional office can be watched. A similar register is maintained in sub-divisional office as well. To ensure that there is no possibility of issue and use of duplicate measurement book and that the MBs are invariably returned to Divisional office after they are completely written up or the work is fully completed.
- **Fly leaf:** Each set of measurements should commence with the following entries relating to the work done. Full name of the work as given in the estimate, Situation of work, Name of contractor, Number and date of Agreement entered into with the contractor or of work order issued in his favour, Date of commencement and completion of work, Date of measurement, Name and designation of the official recording measurement. To ensure that proper identification as to the work, contract and agency are there in MB before commencement of measurement.
- **Entries in Measurement Book:** It should be seen whether entries in the MBs are in ink or in indelible pencil. The entries should be continuous. No contract certificate or bill should be signed without crossing off the related entries in MB. It should be seen whether these rates are

being followed rightly. To see whether all the rules of maintenance of MBs (Paragraph 1320E to 1326E) are being followed to avoid tampering, unauthorised alterations, additions of the entries once made.

- Paragraph 1315E prescribed the powers of different official entrusted with the recording of measurements. It also prescribes the quantum of test check to be conducted by superior authorities. It should be seen whether the authority, recording measurement or a particular work is competent to do so and measurement test checked as prescribed under rules. To see that measurements are recorded by competent authorities and the accuracy of the measurements are test checked.
- It should be seen whether there is frequent correction in quantities. These corrections, even if duly initialed, should be scrutinised.
- To examine the bonafide of the corrections.
- The entries in the measurement book are required to be made at the site itself. An intelligent scrutiny of the measurement book, may sometimes, indicate violation of the rule. The travelling allowance bill of the officials who are supposed to record the measurement or check the same may be consulted and date of measurement compared with the dates of T.A.bill. To ensure that measurements are recorded at-site and not copied into it from loose sheets.
- **Method of taking measurement:** It may be seen whether measurements are taken on same units as appearing in the contract. For example contract may provide rate per square meter while measurement might have been taken in square feet. Further, contract may stipulate payment for ballast or earthwork in cubic meter, while actual measurement may be by trucks. To see whether the method adapted in taking measurement is capable of giving accurate result.
- **Recoveries due under contract, by usage or custom:** The following are the instances of cases in which the question of recovery from the agency will arise. Cost of materials issued in excess of requirement but not returned by the agency, cost on departmental labour engaged on works for which agency was liable, cost of scaffolding if supplied by Railway, the hire charges of roller, crane or any other equipment,

the cost of clearance of site etc. To ensure that there is no short realisation.

- **Measurements in case of renewal of permanent way:** It is to be seen that quantity of old rails and fastenings, sleepers (wooden and steel) generally agree with the quantity of new rails and sleepers etc. utilised. A proper account is maintained of the second hand and released materials and action is taken for the proper disposal. To ensure proper accountal and disposal of second-hand and released materials in replacement renewal works.

- **Measurement of Ballast train work/Materials Train work:** It is not usually convenient to record in measurement book of work done by the contractors in connection with the working of ballast and material trains e.g., loading and unloading of ballast, permanent way materials and other construction materials. In such cases ballast/material train challans in Form E1332 is prepared. This challan, inter alia, contains the station-wise details of quantity handled (loading and unloading) by the contractor. These challans form the basis of preparation of contractors' bills by the Assistant Engineer on receipt of the receipted copy from the receiving subordinates. It should be seen in audit that the journals are properly allocated and that there is the requisite debit whenever the ballast train works for a contractor. The charges debited to contractor should be approximate to the cost of working the ballast train. To ensure correct allocation of the expenditure and recovery of charges from the contractors, where applicable.

- **Measurement of Ballast Train Work/Material Train Work:** If, according to the contract, the contractor is to get free transport of the materials it should be seen that a proper book adjustment is made so that the work is debited with the freight of material carried at ballast train rate/material train rate. Ballast train rate/material train rate adapted may be scrutinised to see that revenue not unduly credited at the expense of capital. To ensure that work is debited with the cost of working of ballast/material train and that the rate of ballast train /material train is reasonable.

- **Standard Measurement Book:** In case of periodical repairs the detailed measurements are dispensed with and in such cases quantities

are recorded in Standard Measurement Books. This type of measurement is applied in cases of works like white washing of quarters on contract where each quarters of a particular group individually entail approximately the same equivalent surface area for white washing. It should be seen from related tender whether the Measurements taken in a group involve approximately same quantity of repair etc. work.

- **Measurements based on standard type drawing:** Detailed measurements are not required in the case of measurements of standard type staff quarters. Quantities provided in the estimate are, therefore, recorded in the MB and payment is made if concerned AEN certifies that work billed for has been carried out in accordance with standard type drawing. Audit is to compare the quantity established in the schedule of the estimate with quantity recorded in the MB. To ensure that measurements are in accordance with the standard type of drawing.

- **Measurement for lump sum contract:** Detailed measurements are not required in the case of work done under a lump sum contract. Audit should see whether there is certificate from the AEN to the effect that work has been completed according to the drawing and specification. To ensure that the work has been executed as per drawing and specification.

- **Approximate or plan measurement:** Detailed measurements may be dispensed with in cases in which payments 'on account' for work actually executed are made on the certificate of a responsible officer, not below the rank of AEN to the effect that not less than the quantity of work paid for has actually been done and that the measurements are from plans or that they are approximately estimated. Audit should at this stage see that the required certificate is forthcoming and the payment has not exceeded the quantity provided for in the plan and estimate. To ensure accuracy of this payment as also its future adjustment when the quantity of work executed is actually measured.

- **Agreement and Form of the bill:** It should be seen that the bills are in proper form (Form E-1337 for 'on account' contract certificate and Form E-1338 for Final contract certificate) and that they are in accordance with the agreement.

To ensure use of proper form. To ensure that there is no deviation from agreement.

- **Comparison of the quantity with the provision in the estimate:** Quantities in bills should be compared with those provided in the estimate and abnormal excesses; if of financial significance should form the subject of comment. To ensure that quantity paid for does not exceed the estimated provision and to locate cases of Material Modification, if any.
- **Minus figures in the quantity:** The minus figure in quantity or in money columns may be the result of previous overpayments either legitimate or otherwise. As for example earthwork originally described as hard and paid for at a higher rate may subsequently be classified as soft and paid for at lower rate, the necessary deduction being made in the final bill. In such cases the reasons for the change in classification may be carefully scrutinised. To see whether the incorrect classification was avoidable.
- **Alteration in the quantities and addenda to the original work orders:** In case the bill contains alteration of quantities in the measurement book etc. may be collected from the local offices/units and the quantity of MB compared with the quantity billed for. To complete audit check properly without postponing it upto next inspection.
- **Bills for supply of tools and other articles of equipment:** If for the tools and equipments an inventory is prescribed it may be seen that there is a certificate from a responsible officer that necessary addition has been made in the inventory. To ensure accountal of the tools and other articles of equipment in the inventory.
- **Acknowledgement of receipt of stores by subordinate officer:** In respect of bills for purchases arranged by COS for direct supply to Indenting Officer it should be seen that the rates charged are accepted by COS and stores have been acknowledged by the receiving subordinate officer. To see accuracy of rate charged and accountal of the materials.
- **Issue of materials outside the contract:** For issue of materials outside the contract or for use of material in excess of requirements of a work it should be seen that necessary supervision, freight and incidental charges have been charged and recovered with the cost of materials

[Paragraph 1269E read with 2329E]. As regards cost of materials the District Officer should specify, in each case, the rate to be charged, which should be the market rate prevailing at the time of issue or issue rate, whichever is higher. To ensure correctness of recovery.

- **Payment towards dismantlement:** It is to be seen that the quantity of released materials arising from a work of dismantlement generally agrees with the quantity of dismantlement paid for. To check the accuracy of working out of the amount paid for dismantlement.
- **Payment for "lead" and "lift" of earthwork:** Quality for "lead" and "lift" of earthwork does not exceed the quantity for excavation paid for. To check the correctness of the amount paid for lifting and carriage of earth.
- **Allowance for 'voids' and 'shrinkage' etc:** It is to be seen that necessary allowance has been provided either in the rates or in measurement for 'voids' & 'shrinkage' etc. To ensure that required allowance for 'void' and 'shrinkage' is provided.
- **On account bill accuracy of payment:** In the case of running on 'on account' bills which are not of the first of series, it is to be verified that all "up-to-date" and other figures which are dependent upon the entries in the previous 'on account' bills are correct by making a reference to the last 'on account' bill. To check the correctness of the bill for payment.
- **Work order and agreement:** It is to be seen that the date of work order or Agreement is not later than the date of measurement.
- **Deduction of security deposit:** It is to be seen that usual deduction of 10% on account of security deposit is made from 'on account' bills and the proper entries have been made in the contractors' ledger and that refund of security is correctly made. To check the correctness of security deposit.
- **Final bill – accuracy of payment:** The quantity charged for in all previous 'on account' bills, plus the quantity executed since last certificate agrees with the total up-to-date quantity charged in the final bill. The amount paid for in all previous 'on account' bills have been deducted from the total amount of final bills. To check the accuracy of payment.
- **Final bills:** It is to be seen that total quantity charged for in the final bill agrees with the details

in the measurement books. During local inspection all the final bills are to be checked with the measurement books. To ensure that quantity paid for always agree with the measurement recorded in MB.

- **Technical checks:** Technical checks are to be exercised by Drawing Office with a view to ensuring correctness of material issued, the executing of work as per sanctioned plan and estimate and the correctness of the method of measurement. Audit is to see that there is

evidence of completing of technical check in the bills. To see that technical checks have been conducted as prescribed under the rules.

- **Payment through financing bank:** When payment due to a contractor is made to financing banks, it should be seen that there is a receipt given by the bank holding a power of attorney or transfer deed from the contractor. To see that there is proper acquittance of payment of payment to financing bank.



## Illustrations

### Illustration-I

(Based on Para 3.1.5 of Audit Report 2007)

#### **Eastern Railway: Injudicious expenditure on construction of Direct Delivery line at Dankuni**

A techno-economic survey for development of a nodal freight terminal at Dankuni Goods Yard (DGY) was sanctioned in 1991 with the idea of shifting the goods terminal activities from Howrah area. As per the survey projections, the average number of trains (inward and outward) to be dealt with at DGY would be nine per day by the year 2006-07. Therefore, the work of development of a nodal freight terminal by adding a few more lines at DGY was sanctioned in April 1994.

In June 1996, the Divisional Railway Manager (DRM)/ Howrah, however, expressed his views that the existing reception/despatch facilities at DGY were adequate to deal with the expected level of traffic after closure of Howrah Goods shed (HGS). Upto this time, Rs.0.45 crore had been spent or committed on the project. Despite the views of DRM, the project was continued as it was envisaged that the entire freight traffic handling at HGS would be shifted to DGY by 31 March 1997 and the space released would help in the expansion of passenger facilities at Howrah. One direct delivery line and two sick lines were completed and commissioned by August 2002 at a cost of Rs.5.14 crore.

- Scrutiny of records of traffic dealt with at DGY in 2005, more than three years after the commissioning of the line, revealed that there was a downward trend of traffic at DGY from 1996-97 itself. The actual average traffic (both inward and outward) was 0.75 rakes per day during the period 2001-02 to 2005-06 against expected traffic of 7.6 rakes per day. Thus, the volume of traffic failed to justify even the existing available facilities. This is further corroborated by the fact that the additional line was not used at all for more than two years after commissioning and even after that only nine rakes had been placed in one year (upto December 2005).
- The original objective of the Project was to shift the HGS and thereby provide additional expansion facilities for Howrah Coaching. Even this, however, has not been achieved since the HGS has not been shifted on the grounds that the annual earnings at HGS were more than the minimum prescribed by Railway Board for closure of a goods shed. Thus, the original objective has been lost sight of and till date the operations continue at HGS whereas additional facilities at Dankuni more or less remained idle.
- Thus, the investment of Rs.5.14 crore was made in a project for creating additional facilities which were not necessary in the first place. Having created the facilities at least these could have been used optimally. The failure to shift HGS has vitiated the original objective.
- Railway Board stated (December 2006) that the facilities developed by way of constructing the direct delivery line could not be freely utilised due to non-availability of direct reception and despatch facilities to and from the line. The same, however, were being developed now. They also stated that the freight terminal had already started handling an appreciable level of 40 rakes per month in the current financial year.
- The reply is not tenable as the handling of approximately 1.3 rakes per day in the year 2006-07 was still far below the expected traffic of 7.6 rakes per day. The fact remains substantially that facilities developed at an investment of Rs.5.14 crore would remain idle till the expected level of traffic is achieved.

**Question:**

1. Find out the reason for which expenditure on construction of this line became injudicious
2. Was there any scope to abandon this project in the mid-way?
3. Do you think the reply of the Railway Administration is tenable? If so, why?

***Illustration-II***

(Based on Para 3.1.1 of Audit Report 2006)

**North Eastern: Sanction of a financially unviable project Railway resulting in unproductive expenditure**

- The work of gauge conversion of Mankapur – Katra – Faizabad (37 kms.) was approved in 1992-93 Railway budget for execution even though Rate of Return (ROR) was negative for Phase I of the project comprising of gauge conversion of Mankapur – Katra (30 kms.) and was only 0.3 per cent for Phase II – construction of Katra – Faizabad new line. Construction of a new line connecting Katra with Faizabad, including provision of a bridge over the river Ghaghra, was justified by the Railways on the consideration that linking of Ayodhya will provide a short and direct link to stations on Central, South Central, Southern and other adjoining Railways; also that the pilgrim traffic to and from Ayodhya would be better served. The Phase II project was proposed even though Katra and Faizabad were already rail heads and there was good road connectivity between the two rail heads.
- The Phase I gauge conversion project was completed and opened to Broad Gauge (BG) traffic on 21 December 1992. Phase II of the project i.e., construction of Katra to Faizabad line, was frozen in September 1993 due to acute constraint of resources and lower priority. However, the Railway Administration proposed (September 1993) acquisition of land for the project on the ground that the area near the proposed alignment between Katra and Ayodhya was fast developing and the land may not be available at a later date due to construction of buildings and other structures.
- The part detailed estimate amounting to Rs.3.95 crore for land acquisition submitted by the Railway Administration in February 1995 was sanctioned by the Railway Board in April 1995. Subsequently, in February 2001, the detailed estimate for the new line between Katra–Faizabad was sanctioned for Rs.80.72 crore though no reasons for reviewing the project were available on record.
- The work of construction of new line between Katra – Faizabad (Ayodhya) was completed in June 2003 at a cost of Rs.95.31 crore and the line opened for goods train services since July 2003.
- Audit scrutiny of the records revealed that no movement of goods train has taken place on the section Katra - Faizabad since the inception of the project. The number of passengers travelling on the section during April 2004 to March 2005 was 74 per cent lower than estimated. The objective of providing a short and direct link to stations on the adjoining Railways, as included in the justification, was not achieved (August 2005) as no train had been introduced on this line since July 2003, when the line was made operative.
- When the matter was taken up (April 2005), the Railway Administration stated (May 2005) that the project had been sanctioned on the basis of socio-economic considerations in addition to operational needs as it would provide a better and alternative connection of North Eastern Railway system with Central, Southern and South Central Railways. Therefore, even though the project had ROR of only 0.3 per cent, the expenditure was justified as it was spent for uplifting the general well being of people served and for better connectivity.
- These arguments are not acceptable because neither goods nor passenger trains have been introduced on this section after opening of the project in July 2003 for linking North Eastern Railway to other neighbouring Zones, as contemplated. In fact, the number of passengers is 74 per cent lower than estimated, belying the argument that better connectivity has been established. Thus, an expenditure of Rs.95.31 crore was incurred on a project, which was financially unviable ab initio, and has proved to be unproductive ever since it was made operational.
- The matter was taken up with the Railway Board in October 2005. Their reply has not been received so far (December 2005).

**Question:**

1. What was the project and how much money was spent broadly on which items?
2. For what reasons the Phase II of the job was frozen and why the same was again revived?
3. Do you agree with the action of the Railway Administration through which the project was completed? If not, why?

### **Solution to the Illustration I:**

1. The projections of the techno-economic survey for development of a nodal freight terminal at Dankuni Goods Yard (DGY) sanctioned with the idea of shifting the goods terminal activities from Howrah area in 1991 were not correct. As per the survey projections, the average number of trains (inward and outward) to be dealt with at DGY would be nine per day by the year 2006-07. Therefore, the work of development of a nodal freight terminal by adding a few more lines at DGY was sanctioned in April 1994. But scrutiny of records of traffic dealt with at DGY in 2005, more than three years after the commissioning of the line, revealed that there was a downward trend of traffic at DGY from 1996-97 itself. The actual average traffic (both inward and outward) was 0.75 rakes per day during the period 2001-02 to 2005-06 against expected traffic of 7.6 rakes per day. Thus, the volume of traffic failed to justify even the existing available facilities which proved that the output of the survey report was very much on the high side and rendered the expenditure on construction of this line injudicious.

2. In June 1996, the Divisional Railway Manager (DRM)/ Howrah, expressed his views that the existing reception/despatch facilities at DGY were adequate to deal with the expected level of traffic after closure of Howrah Goods shed (HGS). Upto this time, Rs.0.45 crore had been spent or committed on the project. On the strength of the views of the DRM/HWH, the project could be abandoned when less than 9% of the total expenditure of 5.14 crores was spent on the project.

3. The reply of the Railway Administration is not tenable due to the fact that at the time of constructing the direct delivery line, the availability of direct reception and dispatch facilities to and from the line should have been considered at the construction of the same and not after 3 years of the completion of the work. The actual level of the rake handling was still far below the anticipated level. Moreover, the original objective of the Project was to shift the HGS and thereby provide additional expansion facilities for Howrah Coaching. Even this, however, has not been achieved since the HGS has not been shifted on the grounds that the annual earnings at HGS were more than the minimum prescribed by Railway Board for closure of a goods shed. Thus, the original objective has been lost sight of and till date the operations continue at HGS whereas additional facilities at Dankuni more or less remained idle.

### Solution to the Illustration II:

1. The work was gauge conversion of Mankapur – Katra – Faizabad (37 kms.), which was approved in the Railway Budget for the year 1992-93. The Phase I of the project was comprising of gauge conversion of Mankapur – Katra (30 kms.) and the Phase II was construction of Katra – Faizabad new line. Construction of the new line connecting Katra with Faizabad, also included provision of a bridge over the river Ghaghra.

The broad items and the cost involved in it is given below in a tabular form:

Sl. No	Names of the items	Amount involved
1.	Land acquisition for Phase II construction of Katra – Faizabad	Rs.3.95 crore
2.	The work of construction of new line between Katra – Faizabad (Ayodhya)	Rs.95.31 crore

2. The Phase II project was frozen in September 1993 as the job was proposed injudiciously since Katra and Faizabad were already rail heads, there was good road connectivity between the two rail heads and also the project had only 0.3 percent Rate of Return. Moreover, due to acute constraint of resources and lower priority job was abandoned.

It was not clear from the file of papers of Railway Administration why the project was revived as there was no reason for reviewing the project on record.

However, the Railway Administration proposed (September 1993) acquisition of land for the project on the ground that the area near the proposed alignment between Katra and Ayodhya was fast developing and the land may not be available at a later date due to construction of buildings and other structures. Subsequently, in February 2001, the detailed estimate for the new line between Katra–Faizabad was sanctioned. The work of construction of new line between Katra – Faizabad (Ayodhya) was completed in June 2003 at a cost of Rs.95.31 crore and the line opened for goods train services since July 2003.


3. No, the action of the Railway Administration can not be agreed upon. The Railway Administration stated (May 2005) that the project had been sanctioned on the basis of socio-economic considerations in addition to operational needs as it would provide a better and alternative connection of North Eastern Railway system with Central, Southern and South Central Railways. Therefore, even though the project had ROR of only 0.3 per cent, the expenditure was justified as it was spent for uplifting the general well being of people served and for better connectivity.

These arguments are not acceptable because neither goods nor passenger trains have been introduced on this section after opening of the project in July 2003 for linking North Eastern Railway to other neighboring Zones, as contemplated. In fact, the number of passengers is 74 per cent lower than estimated, belying the argument that better connectivity has been established.

Slide 1

**Session: 6**


**Audit of Railway Construction**



Slide 4

**Organisation**

- Consists of three wings-
  - Civil Engineering Department headed by CAO/Con/CE (Con).
  - Signal & Telecommunication Engineering Department (including Microwave) headed by CSTE/Con.
  - Electrical Engineering Department headed by CEE/Con




Training Module on Audit of Railways; Session: 6 4

Slide 2

**Learning Objective**

- In this session, the participants will be able to understand the basic concepts of the construction procedures of the Indian Railways which will help them to focus on audit issues in the work context.




Training Module on Audit of Railways; Session: 6 2

Slide 5

**Classification of Construction Works**

- Original Work
  - Construction which comprises of all new constructions (whether entirely new or additions)
  - Alterations to the existing works or
  - Special repairs to special constructions
  - Newly purchased or constructed buildings / equipment
  - Abandoned works to bring them into use.




Training Module on Audit of Railways; Session: 6 5

Slide 3

**Introduction**

- The Railway Construction Department executes the work of construction and maintenance under its own set up till the date of handing over the Project/work to the Traffic i.e. Open Line Organisation.




Training Module on Audit of Railways; Session: 6 3

Slide 6

**Classification of Construction Works contd.**

- Construction of New Lines:
  - After Expenditure Committee's approval and Railway Board's sanction to detailed estimates, Construction wing of a Zonal Railway starts the Civil Engineering work of a new line project. This includes components like earth work, blanketing, spreading of ballast, laying new lines on sleepers etc.




Training Module on Audit of Railways; Session: 6 6

Slide 7

**Classification of Construction Works** contd.

- **Electrification of existing open line:**
  - Construction wing does this work on behalf of open line wing - Construction of ROB (Road over bridge) as joint work with State Government.




Training Module on Audit of Railways; Session: 6 7

Slide 10

**Works started on Urgency Certificate**

- **In case of urgent works**
  - Expenditure may be incurred prior to the receipt of sanction of the authority
- **Divisional Engineer should authorise the commencement of works and submit a report to the competent authority to give administrative approval to the work and to allot the required funds.**




Training Module on Audit of Railways; Session: 6 10

Slide 8

**Classification of Construction Works** contd.

- **Deposit Works:**
  - It is applied to the works of construction or repairs, the cost of which is not met out of the budget of Works Department but is met from other sources.
  - Funds may be placed at the disposal of Construction Department before commencement.
  - Works executed for the State Government /Municipalities /other Government Departments fall under this category.




Training Module on Audit of Railways; Session: 6 8

Slide 11

**Works started on Urgency Certificate contd.**

- **Urgency certificate/urgency report contains:**
  - A description of the work;
  - The date of commencement;
  - The circumstances which bring the work within this category;
  - The maximum probable cost of the work with an enclosure containing an abstract of calculations and
- The date by which a detailed estimate of cost will be submitted.**



Training Module on Audit of Railways; Session: 6 11


Slide 9

**Commencement of Work**

- **Should be authorised by**
  - a competent authority by a written order sanctioning the detailed estimate thereof and allotting the requisite funds.
- **Should not be commenced and liability or expenditure not to be incurred on a work**
  - until a detailed estimate for each has been sanctioned and
  - an allotment of the requisite funds made by competent authority.

**Except in few cases like-**

- for the construction or purchase of a new work or asset under the category of new minor works if estimated to cost upto **Rs. 5,000.**




Railways; Session: 6 9

Slide 12

**Material Modification**

- **No material modification should be permitted without the prior approval of the authority competent to sanction the estimate.**
- **The following may be treated as material modifications on lines under construction and open line works estimated to cost Rs.1 crore and above:**
  - Any change in the alignment likely to affect the facilities offered to the public in the neighbourhood or likely to increase or decrease the length of the line by over 1 km.;
  - Introduction of any new station or omission of any station;
  - Any alteration in the type or number of engines or vehicles provided in an estimate for rolling stock etc.




Training Module on Audit of Railways; Session: 6 12

Slide 13

**Agencies for Executing Works**

- Works of construction repair or maintenance may be carried out through the agency of either-
  - Departmental labour, or
  - Contracts, or
  - Other departments and public bodies such as municipalities, port trusts, etc., or
  - Other Railway Administrations.




Training Module on Audit of Railways; Session: 6 13

Slide 16

**Classification of Survey** contd.

- **Reconnaissance Survey**
  - Applied to all rapid and rough investigations of an area
    - to determine the technical feasibility and approximate cost of one or more routes for a projected railway line.
- **Preliminary Survey**
  - A thorough and detailed instrumental examination of the route /routes selected as a result of Reconnaissance in order to obtain close estimate of the projected line.




Training Module on Audit of Railways; Session: 6 16

Slide 14

**Classification of Survey**

- Various kinds of surveys are prevalent in Railways-
  - Traffic Survey
  - Reconnaissance Survey
  - Preliminary Survey
  - Final Location Survey




Training Module on Audit of Railways; Session: 6 14

Slide 17

**Classification of Survey** contd.

- **Final Location Survey**
  - A post investment investigation
    - to prepare working details and
    - to conduct accurate costing by dint of theodolite and/or Electronic Distance measuring instruments and
    - by making a report along with fuller and detailed plans and sections.




Training Module on Audit of Railways; Session: 6 17

Slide 15

**Classification of Survey** contd.

- **Traffic Survey**
  - A detailed study to make a forecast of the traffic prospects to facilitate the most promising route and category of line
    - to be constructed in case of new lines and
    - to assess the quantum of traffic to determine the traffic facilities to be provided on existing line.




Training Module on Audit of Railways; Session: 6 15

Slide 18

**Project Report**

- At the conclusion of investigation, the Project Investigator shall formulate a report called 'Project Report'.
- This report is compiled under captions -
  - Introduction
  - Characteristics of Project Area
  - Standards of Construction
  - Route Selection
  - Project Engineering, Estimation of Cost and Construction Schedule and
  - Conclusions and Recommendation.




Training Module on Audit of Railways; Session: 6 18



Slide 19

**Final Works Programme (FWP)**

- Railway Board will decide the works which should be undertaken during the following year and which should be included in the Final Works Programme.
- It will then modify its Works Programme as a result of the Board's decision.




Training Module on Audit of Railways; Session: 6 19

Slide 22

**Construction / Works Accounting** contd.

- Dy. CE (Con)/Div. Engineers along with Accounts wing are posted in each Division to check and compile the divisional accounts under the supervision and responsibility of FA&CAO/Cons.
- Compiled Accounts are rendered monthly to the FA&CAO/Cons. by the Accounts Officers of the Construction wing of the Divisions.




Training Module on Audit of Railways; Session: 6 22

Slide 20

**Financing of Works Budget**

- Prior to execution of any work, four items are basic pre-requisites:-
  - Administrative Approval,
  - Expenditure Sanction,
  - Technical Sanction,
  - Appropriation or Re-appropriation of Funds.




Training Module on Audit of Railways; Session: 6 20

Slide 23

**Accounting Records maintained in a Rly. Division/Sub-division.**

<ul style="list-style-type: none"> <li>• Cash Book</li> <li>• Measurement Book</li> <li>• Muster Roll</li> <li>• Register of Works</li> <li>• Contractor's Ledger</li> <li>• Work Charged Establishment</li> <li>• Various Suspense Accounts</li> </ul>	<ul style="list-style-type: none"> <li>• Stores Accounts</li> <li>• Tools and Plants Accounts</li> <li>• Deposits</li> <li>• Revenue Accounts</li> <li>• Register of Journal / Transfer Vouchers</li> <li>• Monthly Accounts</li> </ul>
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


Training Module on Audit of Railways; Session: 6 23

Slide 21

**Construction / Works Accounting**

- To monitor expenditure against sanctioned estimates.
- Designed to incorporate the techniques of double-entry system of Book-Keeping in Government Accounts.
- Ensures integration of financial and cost accounts to bring about cost control.




Training Module on Audit of Railways; Session: 6 21

Slide 24

**Measurement Books (MBs)**

- The payment for works done, supplies made or services rendered are made on the basis of Measurement Books.
- Important initial accounting record of quantity of work done by a contractor or by labourers employed departmentally or material received.
- Measurements to be recorded neatly and directly in MB at the site of work only.

**All MBs should be serially numbered.**




Training Module on Audit of Railways; Session: 6 24

Slide 25

### Muster Rolls

- Used for getting the work done departmentally through daily rated workers.
- A roll is issued for a specific period not exceeding one month at a time.
- One or more muster rolls can be kept for each work.


 Should never be prepared in duplicate.

Training Module on Audit of Railways; Session: 6 25

Slide 28

### Preparation and Passing of Bills


- Entries in the Measurement Book to be scrutinised.
- Full rates as per agreement/supply order should be allowed only if the quality of work done or supplies effected conform to the specification.
- In case of supply, payment is not permissible until the stores have been received and found in good condition and conforming to specification.

 Training Module on Audit of Railways; Session: 6 28

Slide 26

### Register of Works


- A permanent and collective record of expenditure incurred in the division during a year on each work.
- Designed for effecting control of expenditure on works with reference to estimates.
- Maintained in division and posted monthly as soon as the bills against estimates are passed by Accounts.

 Training Module on Audit of Railways; Session: 6 26

Slide 29

### Principles to be Observed in Framing Contract Agreements


- Terms of contract must be precise and definite,
- No room for ambiguity,
- Following matters to be agreed upon -
  - What the contractor is to do; when and to whose satisfaction is work to be done; and on what terms.
  - What the railway administration is to do; and on what terms.
- What payment is to be made; what is to cover, to whom it is to be made, and the method and basis of making it.

 Training Module on Audit of Railways; Session: 6 29

Slide 27

### Contractor's Ledger

- It contains running account with each contractor showing
  - Payment and recovery of advances paid
  - Accounts relating to Contractors should be kept, as personal accounts in Contractor's Ledger
  - Separate folio should be opened in the Contractor's Ledger for each Contractor.
- Should be posted as bills are paid
- Should be closed and balanced monthly.


 Training Module on Audit of Railways; Session: 6 27

Slide 30

### Principles to be Observed in Framing Contract Agreements

contd.


- The terms on which variations and modifications are to be permitted,
- The measures to be adopted in the event of a breach of the contract by either party thereto; and the correct method of and the grounds for determination thereof,
- The method of settling disputes .

 Training Module on Audit of Railways; Session: 6 30

Slide 31

### Forms of Contract

- **Forms of contracts:**
  - Piece Work Contract
  - Work Order
  - Lump Sum Contract
  - Schedule Contract
  - Contracts for Zone Works and Engineering Materials.




Training Module on Audit of Railways; Session: 6 31

Slide 34

### Accounting of Tender Documents

- Forms should be duly initialed,
- Forms should be kept in the charge of the concerned Departmental official before issue,
- Register should contain a chronological record of issue of tender forms,
- Forms should be issued individually and acknowledgements should be taken on a register to avoid fake tenders,




Training Module on Audit of Railways; Session: 6 34

Slide 32

### Forms of Works Contract

- **The forms of contract primarily intended for application to Works Contract are:**
  - Lump Sum Contract
  - Schedule Contract
  - Piece Work Contract




Training Module on Audit of Railways; Session: 6 32

Slide 35

### Tender Committee

- Constituted by the authority competent to accept the tenders where the tender value involves more than Rs.10,000/-.
- When GM is the authority competent to accept the tender, the H.O.D. concerned should arrange to constitute 'Tender Committee', which shall consist of:
  - Minimum three members of whom one should be of Accounts, one of the concerned Executive department and the third from another department which also deals such contract matters.
- An officer recommending acceptance in his own capacity should not also be the accepting authority of the same tender.




Training Module on Audit of Railways; Session: 6 35

Slide 33

### Classes of Tenders

- Open Tender System
- Limited Tender System
- Single Tender System




Training Module on Audit of Railways; Session: 6 33

Slide 36

### Earnest Money Deposit

- A security against loss,
- Forfeited if the tenderer fails to comply with the stipulation,
- Based on fixed percentage of the estimated cost of work,
  - subject to maximum of 2½% ad valorem for works costing upto Rs.5 lakhs and
  - 2% ad valorem for works costing more than RS.5 lakhs.
- The Rly. Administration may on discretion fix lower or higher percentage of earnest money for any work in view of the value and nature of work and to safeguard Railways interest




Training Module on Audit of Railways; Session: 6 36

Slide 37

### Security Deposit

- Paid by contractor in token of the due fulfillment of a contract.
- Payment mode :
  - Cash.
  - Govt. security including State Loans Bonds.
  - Deposit receipts, Pay Orders, Demand Drafts and Guaranteed Bonds, either of SBI or of any of the Nationalised Banks.
  - Guaranteed Bonds executed or deposit receipts tendered by banks.
  - A Deposit in the Post Office Savings Bank
  - Nationalised Saving Certificates, twelve year National Defence Certificates, ten years Defence Deposits, National Defence Bonds and Unit Trust Certificates.




Training Module on Audit of Railways; Session: 6 37

Slide 40

### Audit Checks on Rly. Construction Expenditure contd.

- Avoidable delays due to inefficient planning, resulting in increase in the total cost,
- Any serious or recurring losses,
- Performance/cost compares well with the result obtained in respect of similar schemes in other fields in the public sector
- Whether modern techniques such as Critical Path Method (CPM) and Programme Evaluation & Review Techniques (PERT) etc. exist and are put to use in the project.




Training Module on Audit of Railways; Session: 6 40

Slide 38

### Audit Checks on Rly. Construction Expenditure

- Expenditure incurred with due regard to general principles of financial propriety
- Expenditure falls within the scope of a grant,
- Regularity of the expenditure
- Expenditure is covered by the proper sanction,
- 'Propriety Audit' extends beyond the formality of the expenditure to its wisdom, faithfulness and economy.
- Assessment of three Es i.e., Economy, Efficiency and Effectiveness of the outlay.




Training Module on Audit of Railways; Session: 6 38

Slide 41

### Records/Register to be seen during Audit contd.

<ul style="list-style-type: none"> <li>• Muster Sheet</li> <li>• Register Of Wages</li> <li>• Measurement Book</li> <li>• Contractor's Bill</li> <li>• Contractor's Ledger</li> <li>• Cash imprest account</li> <li>• Cash Receipt</li> <li>• Cash Remittance</li> <li>• Material-at-Site-A/C</li> <li>• Tools and Plant A/C</li> <li>• Regr. of Works</li> <li>• Revenue A/CsS</li> </ul>	<ul style="list-style-type: none"> <li>• Abstract Estimate</li> <li>• Admn. approval</li> <li>• Detailed Estimates</li> <li>• Technical Sanction</li> <li>• NIT</li> <li>• Tender Documents</li> <li>• Accepting Letter</li> <li>• Agreement</li> <li>• Terms and Condition</li> <li>• Completion Report</li> <li>• Completion Estimate</li> </ul>
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


Training Module on Audit of Railways; Session: 6 41

Slide 39

### Audit Checks on Rly. Construction Expenditure contd.

- Objectives of the project have been clearly defined,
- Programmes have been drawn up in accordance with the these objectives,
- A good management information system (MIS) exist for collecting reliable data and progress reports,
- Performance should be compared with Indicators to evaluate efficiency,
- Technical estimates or detailed programmes and cost schedules are framed and adhered to.



Training Module on Audit of Railways; Session: 6 39

# **Session: 7**

## **Audit of Railway Stores**

<b>Session Title: Audit of Railway Stores.</b>		Session Guide
<b>Instructor's Guide</b>	Reference	Participants' Response
<b>Session Overview</b>		
<b>Welcome</b> participants to the session and remind them that their active participation is critical for the success of each session.	Lecture	
<b>Learning Objective</b>		
<b>Inform:</b> Given the inputs of functions of Controller of Stores of Indian Railways, accounting procedure of Stores, its purchase procedures and custody etc. through group discussion, lecture and PowerPoint slide show, the participants will at the end of the session acquire basic concepts of the function of the Stores department in Indian Railways which will help them to focus on audit issues in the practical work context.	Lecture	
<b>Basic Concepts</b>		
<b>Discuss:</b> <ul style="list-style-type: none"> <li>● Classification of stores, funds, accounting procedure</li> <li>● Purchase of stores</li> <li>● Receipt and custody of stores, related registers</li> </ul>	Lecture and PowerPoint Slide show 'Session 7 AUDIT OF RLY. STORES'	
<b>Application:</b>		
<ul style="list-style-type: none"> <li>● Distribute Illustration I with questionnaire</li> <li>● Request the participants to answer the questionnaire.</li> <li>● Distribute the Solutions to Illustration-I</li> <li>● Discuss the Solutions and elicit the views of participants.</li> <li>● Distribute Illustration II with questionnaire</li> <li>● Request the participants to answer the questionnaire.</li> <li>● Distribute the Solutions to Illustration-II</li> <li>● Discuss the solutions and elicit the views of participants.</li> </ul>	Session 7 Illustration I & II and Solution to Illustration I & II	
<b>Summarise:</b>		
<b>Distribute</b> Participants' Note. <b>Tell</b> the participants that during the session, we discussed Classification of stores, funds, accounting procedure and purchase of stores etc. etc. <b>Invite</b> questions on themes discussed. If participants have any doubts/clarifications about themes, clarify the same. Answer participants' queries. <b>Thank</b> the participants and bring the session to a close.	Session 7 Participants' Note	

**Training Method:** Interactive Lecture and Power Point Slide Show.

**Materials Required:** Power Point Slides, Projector, White Board, Marker Pen and Participants' Note.

## Session Title: Audit of Railway Stores Organisation of Stores Department Controller of Stores

- The Administration and control of the stores of a railway are entrusted with a Controller of Stores. He is responsible for the supply of materials and stores in the most efficient, economical and expeditious manner possible.
- The centralised control that is required for management of stores is vested in the Controller of Stores. He is responsible for the-
  - Purchase and inspection
  - Custody and issue of railway Stores
  - Issue and maintain up to date a Nomenclature-cum-Price List
  - General Supervisory Control of Stores and
  - Purchase of Stores.
- The items of stores are procured from different/branches.
  - Direct /purchase by the Administration (Controller of Stores).
  - Purchase through Directorate General of Supplies and Disposals.

### Classification of Stores

- **Stock Items**-Stores which are kept in the custody of the Stores Department which are frequently and regularly required and whose unit cost justifies incurring inventory carrying cost associated with these items.
- **Ordinary stores**- Stores-which have a regular turnover caused by a constant demands and which are stocked by the stores department in its Depot.
- **Emergency stores**- Stores which are stocked to meet emergencies but have no regular turnover caused by a constant demand.
- **Special Stores**- Stores required for special work and special purpose and are not stocked in Stores Department.
- **Surplus Stores**- surplus stores are divided into two types, Movable and Dead.
  - Stores which have not been issued for a period of 24 months, but will be used in the near future are called **Movable Surplus**.

- Stores which are not likely to be utilised on any railways within next two years are termed as **Dead Surplus**.

### Funds in Stores Department

- The funds sanctioned each year for purchases are in respect of :
  - Stores for Capital works
  - Stores for works chargeable to DRF, DF, & Open Line Works Revenue and
  - Stores required for general purposes.
- This lump sum allotment is distributed by the General Manager between the several heads of stores. This distribution should be intimated to Stores Accounts Office.
- A manuscript fund register should be maintained for the purpose of watching the incurrence of liabilities against the budget grant stated earlier.
- Before placing any order or indent, a certificate regarding availability of funds should invariably be obtained from the Accounts Officer, Stores.

### Stores Accounting

- The following heads of Accounts under Capital & Revenue are generally operated upon in the Accounts Books of the Stores Accounts Office:
  - Capital:
    - Major Head: 67A & 67B.
    - Minor Head: 71 Stores suspense and 73 Misc Advances.
  - The following are the heads of Accounts under Revenue:
    - Working Expenses
    - Revenue Abstracts
    - Misc. Advances
    - Deposit Misc.
    - Transfer Divisional
    - Transfer Railways
  - The following annual accounts should be submitted by the Stores Accounts Office to the Books Section on the prescribed date:
    - Capital & Revenue Accounts
    - Finance Accounts
    - Appropriation Accounts

### Bills

- Internal check of the bills for direct purchase by Controller of Stores are as under:
  - A check of Purchase Order
  - A check of Receipt Note

- The maintenance of Purchase Accounts Register to enable a record being kept of the liabilities incurred on account of stores purchased from each supplier.
- The liabilities incurred in connection with receipts of stores are discharged either:
  - by direct payment or,
  - by means of book adjustment.
  - Bills in respect of which direct payments are made are in respect of purchase by Controller of Stores, Director General of Supply & Disposal and local purchases of petty stores by Deputy Controller of Stores/District Controller of Stores etc.
- Railway inter departmental transaction manufactured stores supplied by Railway Workshop, Payment to other Government Department & other Railways come under Book adjustment.
- **Check of bills**-On receipt of the bill, it should be seen that the bill is prepared in a standard form, if not all the necessary particulars required by the form are given. Marked as original and free from unattested correctives and bear the signature and address of the vender.

### **Accounts responsibilities regarding purchase of stores**

- The quantity to be ordered has been correctly estimated on the basis of past consumption and/or other factors;
- These are properly sanctioned, are made economically and in accordance with any rules or orders made by competent authority for purchase of stores
- When stores are purchased from contractors, the system of competitive tendering is adopted and the purchase is made from the lowest tenderer, unless there are recorded reasons to the contrary;
- The rates paid agree with those shown in the contract or agreement for the supply of the stores;
- In case of advance payment, pending receipt of materials, the relevant documents in terms of the contract are enclosed with the bill;
- Certificates of quality and quantity are furnished by the passing and receiving railway servants before payment is made;
- Purchase orders have not been split up so as to evade the sanction of higher authority which

may be necessary with reference to the total amount of the orders.

### **Schedule of Rates**

- **New Stores**-The rates for new stores should be the average book rate or the current market rate whichever is less.
- The average book rate is the rate arrived at by dividing the value balance shown in the priced ledger by the quantity balance.
- **Workshop Manufactured Stores** - The price list rates for workshop manufactures stock items would be the rates fixed half yearly by the Mechanical Department and the average book and ledger rate will be in the price list rates in force from time to time.
- **Schedule of Scrap**-The rates for scrap materials should be included in the schedule of scrap. These rates should be revised as frequently as necessary and not less frequently than once a year by the Controller of Stores in consultation with the Chief Accounts Officer with reference to the local data available.

### **Audit of 'Purchase of Stores'**

- **Sources of supply**- Four sources of supply or receipts of materials required by Railways:
  - Purchases,
  - Manufactured by Railway Workshop,
  - Returned Stores and
  - Transfer of Stores from other Railway Departments.

*Regarding Tenders and Contracts, procedure as depicted in Session 6 may be followed.*

### **Fundamental Principles of Contracts for the Purchase of Stores:**

- The following are the fundamental principles of contract:
  - The Item of the Estimated must be precise and definite.
  - Legal and financial advice should be taken in the drafting of contracts.
  - Standard form of contract should be adopted.
  - The terms of the contract should not be varies except in consultation with competent financial authority.
  - Wherever possible and advantageous contract should be finalised based on open tender basis and



- Reasons should be recorded where lowest tender is not accepted.
- The financial status of the individual firm should be considered.
- In absence of formal written contract no order for supplies should be placed without a written agreement as to price.
- Safeguards of Govt. property entrusted to contractor must be ensured.
- Railway right to cancel the agreement at any time after expiry of six months notice in respect of long term agreement should be incorporated.

### Annual Programme System

- Time table- before the C.O.S. can estimate the quantities required for the interim period and contract period for the entire railway. He has
  - to obtain detailed information from Depots of their estimated requirements.
  - to consolidate the information thus obtained.
  - to review the current contracts for supplies of stores.

### Procurement of Stores

- As per Indian Railway code for the Stores Department the Controller of Stores will decide what items are to be procured on maximum/minimum basis.

### Agency for Purchase

- Purchase of materials for Railway are arranged either-
  - By the Railway Board or directly by the Railway Administration.
  - Through the agency of Government Department viz.
    - The Director General of Supplies and Disposal.
    - The Controller of Stores.
    - Government Medical Stores Department.

### Purchase Procedure

- The procedure adopted for the ordering, inspection and receipt of stores should provide inter alia for:-
  - The Accounts Officer/Stores will get a copy of the purchase order duly signed by the officer placing P.O.
  - The officer of Stores Department receiving the stores supplied will submit Receipt Note to Accounts Office (i.e. a duly

received copy of the suppliers invoice after it has been posted in the Numerical ledgers).

### Suppliers Challan

- Supplying firms will submit in duplicate a challan along with the materials supplied by them. A copy of the challan should also be forwarded to the Purchase Officer.

### Combined Receipt & Issue Note Inspection

- All stores purchased by Controller of Stores should ordinarily be inspected by an Inspecting Officer of the railway where the materials are despatched directly to an indenter, the indenter is responsible for inspection and for arranging suitable test.
- The Controller of Stores may also avail of the facility provided by the Director General of supplies and Disposals for inspecting and testing of materials.
- Controller of Stores also avails of the facilities provided by Rail India Technical & Economic services for inspection and testing of materials.
- Method of Granting receipt and making payment for steel materials: -
- Payments for materials are as a rule made for the actual quantity received. But in the case of all steel raw materials in the rolled or semi finished condition the procedure will be as follows: -
  - As the actual weights in the case of these articles are not likely to conform to the standard weights limits of tolerance over or below which the actual weights may not vary from the standard weight are generally laid down in the specification governing the supply.

### Purchase through DGSD

- Except in cases where stores are arranged through the agency of the contractors, item of stores mentioned in Appendix VI of Indian Railway Stores Code are procured through DGS&D.

### Inspection

- All articles except machine tool purchased through the DGS&D should be inspected and tested by that department.

### Receipt Notes

- In the case of indents on DGS&D or orders against rate or running contracts, Receipt Notes

Part I to IV in the names of suppliers through DGS&D should be prepared by the Railway Inspection Officer or the Depot Officer concerned.

### Payment

- The Pay and Accounts Officer (Ministry of Urban Development) pays all bills for stores purchased by the DGS&D and raised debits against the departments concerned.

### Shortage

- Any complaint regarding shortages of or damage to stores, indenter should take up the issue with supplying firms and carrier direct. The DGS&D should be addressed where indenter unable to obtain satisfaction from the firm or the carrying railways.

### Sleepers

- Sleepers are of following kinds:-
  - Wooden sleepers
  - Metal sleepers
  - Cast iron or
  - Steel
  - Concrete sleepers.

### General Procedure for Procurement of Sleepers

- Procurement of sleepers is centralised in the Railway Board along with other centralised track items.

### Demand

- The requirement of sleepers are for planned track renewal works, by the Railway Board. Annual requirement of these sleepers are reviewed in Chief Track Engineer Conference with Railway Board. Based on fund position availability of sleepers in the country, the Railway Board makes specific allotment for various types of sleeper to the Zonal Railway.

### Specification

- The procurement of sleepers will be done as per the specification approved by the Railway Board.

### Stationery and Printing-Stores and Forms

#### Purchase policy

- The policy of the Government of India is to make their purchases of printing and stationery stores for the public service in such a way as to encourage the development of the industries of the country to the utmost possible extent consistent with economy and efficiency.

### Inspection and Test

- All articles should be subject to inspection before acceptance and articles for which specification and/or test have been prescribed should be required to conform to such specification and/or to satisfy such test.

### Indent for Stationery

- The various departments, stations and offices of the railway should submit to the Controller of Stores or the Superintendent printing and stationery, the indent of their annual requirements of stationery on a date to be fixed by the C.O.S. or Printing and Stationery.
  - Preference
  - Firstly to articles produced in India in the form of raw material manufactured in India provided that the quality is sufficiently good for the purpose.
  - Secondly, to articles wholly or partially manufactured in India from imported materials provided that quality is sufficiently good for the purpose.
  - Thirdly, to articles manufactured abroad and held in stock in India provided they are suitable type and requisite quality.
  - Fourthly, to articles manufactured abroad which need to be specially imported.

### Check of Indent:-

- Indents from departmental officers and stations and offices should be checked with the sanctioned scale for such offices.

### Receipt and Accountal:-

- The supplies from Controller of Printing and Stationery should be checked with the entries in the annual and emergent indents and the Bill for the cost of the stationery which accompanies the supplies should be receipted and sent to the Stores Accounts Officer for audit and payment.

### Receipt and Custody of Stores

- Stores are received in a depot through the following sources:
  - Indigenous Purchases
  - Imports
  - Manufactures from Workshop
  - Returned Stores
  - Depot transfers
  - Sale/loan of stores from other railways
  - Materials sent by departments to depot attached to Workshop not for stock but for transmission to the shops for repair.

- Sample received from firms.
- Returnable empties.

### Receipt of Materials Inwards:-

- All materials will be received inwards through the Receipts section along with the relevant vouchers and acknowledgement given on the registers of the Receipt Section.

### Custody of Stores and Protection

- It is the duty of the Depot Store Keeper and his staff to take proper precautions for the protection of stores and materials against deterioration and loss valuable stores and fittings and materials which are of common household use and are therefore likely to be liable to pilferage should be kept in locked shed.

### Payment of Stores Bills

- The liabilities incurred in connection with receipts of stores are discharged either
  - by direct payment, or
  - by means of book adjustment.

### Stock Verification:-

- As an important back check on the correct receipt and issue of stores by the wards, it is necessary to have a Test check to see whether the upto date balance of an item in the ledger agrees with actual physical stock balance. Stock verifications are two types:-
  - Accounts Stock verification
  - Departmental stock verification

### Disposal of Scrap:-

- There accumulates on every Railway a large quantity of material of different kinds which is no longer useful for the purpose for which it was originally procured. Such material is generally called "Scrap" and should be distinguished from other stores and component parts which can be utilised after repair or renovation. Scrap also consists of empties, turnings, borings, cut odds and ends of metal, sweepings, foundry ashes etc. which accumulates in Railway Workshops. Occasionally scrap may consist of second-hand or even new material which the Railway can neither consume itself nor can dispose of to other Railways. These stores may be in excellent repair and command a fair price in the market not associated with scrap.
- A detailed schedule of scrap should be maintained by each Railway Administration under group 98 of the State Railway Classification of Stores. In preparing the schedule the use to which the material could be

put by the likely purchasers should be kept in view, so that the items may fetch a reasonable price in the auction sales. Scrap of different metals and alloys should be scheduled as far as possible under separate main headings, with suitable sub-headings describing the form in which the material is put up for sale.

- Collection of Scrap:
  - (1) Except for those items of scrap which the consuming departments have been authorised to dispose of, the Stores department should arrange for regular collection of all items of scrap from the consuming departments and for its disposal. If the scrap is to be disposed of by public auction, arrangements should be made for its collection at convenient points for the purpose of such sales, determined largely by the freight charges to be met, the room available for storage and the proximity to a market for such scrap.
  - (2) The Controller of Stores may however decide to dispose of any particular item of scrap at site or at the point of generation of scrap, it is more advantageous to do so.
- "Scrap for Workshop use"- Scrap suitable for use as raw materials for foundries & c. in railway workshops should invariably be reserved for such use, only the excess over such requirements being sold.
- 2405. In the case of dispatches of scrap from out stations, arrangements should be made to see that double handling is avoided and that the scrap is sent, as far as possible, direct to the stores depot attached to the workshop concerned or to the depot at which scrap sales are conducted as the case may be.
- Sorting and Storage of Scrap - When scrap is returned to the stores depot, the Officer or subordinate returning it, should see that it is sorted out according to the correct nomenclature of the Price List before it is actually dispatched. On receipt in the stores depot, the scrap should be further sorted out, if found necessary.
- Suitable arrangement should exist in the stores depot to ensure that the scrap ready for sales is not mixed with other scrap that is being received. For this purpose, there should be kept, if it is possible to do so, two sets of scrap bins or dumps for each kind of scrap, so that the scrap accumulated in one set of bins or dumps could

be set apart at any time for the purpose of auction sale and pending such sale, the other set of bins will be used for accumulating further scrap for the next auction.

- Auction sale of scrap at Stores Depots:- Before any item of stores can be sold as 'scrap', it should be declared as such by Survey Committee appointed by the General Manager of the Railway and the sanction of the competent authority obtained to such sale excepting where such sanction has already been obtained in terms of Para 2228.S. The General Manager may relax this rule in the case of known items of scrap of small value including the items generally sold to Railway Employees. However this dispensation is subject to furnishing of a certificate by concerned departmental officer not below the level of JA Grade that the item being offered have been inspected by him personally and found unserviceable & unfit for any further use on the Railways. (Authority: Board's letter No. 98/RS (G)/779/10(CS) dated 14-01-2009).

- Scrap will be sold generally by auction but the administration considers that more advantageous prices are likely to be obtained, other ways of disposal enumerated in para 2302.S may be adopted.

- "Lot" Register for Scrap: All scrap material accumulated for the purpose of auction sale should be separated into convenient 'lot' of a size that would suit the bidders at auctions. A 'Lot' Register should be maintained showing the following particulars :

(1) 'Lot' Number (2) P.L. No. (3) Description of material. (4) Approximate quantity (5) Book Rate (6) Rate in previous auction (7) Sanction reference of Survey Sheet (8) Rate at which sold (9) Name of the purchaser (10) Total value at auction rate. (11) Remarks.

- Survey Sheets for Scrap:

- (1) Particulars of each lot should then be entered on the Survey Sheets which are submitted to the Survey Committee. It is one of the important duties of the survey committee to inspect each lot and record its recommendations on the survey sheets. The Controller of Stores should then obtain the sanction of the competent authority to the sale of such articles by auction, if he finds he

is unable to dispose of the same by transfer or sale to other railways, Government departments excepting where such sanction has already been obtained.

- (2) Reserve Price: Reserve prices based on the bids obtained at past auctions and any other information available should be fixed by the Controller of Stores or the depot Officer for such item of scrap to be sold in order that the item may be withdrawn from the sale, if the bids are found unsatisfactory. Bids lower than the reserve prices may, however, be accepted by the Depot Officer where found expedient provided the Depot Officer doing so records his reasons in writing.

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## AUCTION SALES

- Agency for Auction Sales.: A Railway Administration may either conduct its auctions itself or enter into agreement with an auctioneering firm of repute and financial standing to handle the sale of railway materials by auction.

- Legal Position of Auctioneer: The position of an auctioneer up to the fall of the hammer is that of an agent for the vendor, that is, the Railway Administration. The auctioneer thereafter becomes the agent of the highest bidder (the purchaser) as well, and a proper contract must be made to bind both parties i.e., the Purchaser and the Railway Administration. The Conditions of Sale should therefore, be drawn up before the sale. The auctioneer has no authority as the agent of the Railway Administration to warrant the goods, and he cannot add to or alter the particulars of Conditions of Sale by any verbal declaration made in the auction room at the time of the sale.

- Agreement and Conditions of Sales: A skeleton form of agreement between a railway administration and a firm of auctioneers is illustrated in Appendix, IX Appendix 'X' indicates the "General Conditions of Sales by Auction" which may be adhered to with advantage.

- Samples: Small quantities of scrap required by prospective bidders for purposes of assay or other tests may be sold to them at schedule rates out of materials prepared into lots for auction.

- Auction Arrangement at Stores Depot.: No auction should actually be started without the prior permission of the Controller of Stores. The Controller of Stores while according such permission, should examine whether there is going to be any over-lapping of auctions by the same auctioneer, either in respect of deliveries or payment of sale proceeds or both. Such overlapping shall be avoided as far as possible. When however, this is unavoidable, the Controller of Stores should consider carefully to see that the interests of the Administration are not jeopardized in any way.

- The Depot Officer or any other Officer nominated by the Controller of Stores to supervise the auction will be responsible for the conduct of the auction.

- Presence of an Accounts Representative at Auction Sales.: The Accounts Officer (Stores) who should have received timely intimation of the auction should depute an Inspector of Stores Accounts or a Stock Verifier as an Accounts Representative to witness the auction sale.

- From the catalogue and the Survey Sheets prepared for the auction, the Stock verifier witnessing the sales should post a manuscript register containing the following particulars:

(1) Date of auction (2) "LOT" Number (3) P.L. Number (4) Description of the material (5) Approximate quantity (6) Book rate (7) Book value (8) Sanction ref. of the Survey Sheet

(9) Name & address of the purchaser (10) Auction Bid rate (11) Delivery Order No. & date (12) Quantity delivered (13) Value (14) Loss or gain on sale.

(15) Issue Note No. & date (16) Gate Pass Number & date (17) Wagon Number (18) Railway Receipts No. & date (19) Loading charges (20) Ground Rent recovered, if any (21) Remarks (22) Countersignature of Depot Officer

- Columns (1) to (8) mentioned above should be posted before the sale. As lots are sold, columns (9) & (10) will be written up by the Stock-Verifier and at the end of the day the entries in his register will be compared with those in the auctioneer's (or Yard Foreman's) statements The rest of the columns in the

Register should be filled up by the Stock Verifier from his Field Book (S. 2428 which will be his initial record in which the deliveries of such materials as they are affected will be noted.

- Material should not be sold at rates per lot but bids should be registered by a number or weight unit so that a complete check on the quantity delivered can be exercised, at any time

- The Stock Verifier should see that the Conditions of Sale are being observed and that stores are not being sold at obviously low prices. If he thinks that any irregularity is taking place or proper prices are not being obtained, he should bring the matter immediately to the notice of the Officer in charge of the sale and report the case in writing to the Accounts Officer, Stores.

- Deliveries of Stocks: The Depot Officer should arrange for the deliveries being effected according to the agreement and terms and conditions of sale and such other specific or general instructions as may be issued by the Controller of Stores. He should take every possible step to expedite delivery of the auctioned materials.

- Auctioneer's Delivery Order: Before material is loaded for delivery, the purchaser has to present to the Depot Officer a Delivery Order, made out by the auctioneers authorizing Stores Department to make such delivery. The Delivery Order should show the following particulars: (1) Lot number (2) Description of material (3) Purchaser's name and address (4) Approximate quantity in the lot (5) Rate at which sold (6) Value realized (7) Reference to the Cash Remittance Note under which the amount shown in column 6 was remitted to the Railway's Cashier or Treasurer (8) Chief Cashier or Treasurer's Receipt Note and date (9) Amount of loading charges recovered by the Depot Officer.

*Note: (i) Columns 1 to 8 will be filled in by the Auctioneers, and column 9 by the Depot Officer.*

*(ii) An auctioneer's delivery order is not necessary when the auctioneer does not function as the Agent of the purchaser. The delivery may be made to the purchaser or his agent on the strength of the Cashier's Receipt.*

- Ground Rent should be charged if the material is not removed within the stipulated time and the Accounts Representative will be

responsible for seeing that where Ground Rent has become due, it is recovered by the Depot Officer before delivery of the Stores. The amount realized as Ground Rent should be noted in the Issue Note by the depot and certified by the Stock Verifier. The Depot Officer will be responsible to remit the cash to the Divl. Cashier or the local Station Master. In exceptional circumstances and when the Earnest Money paid by the purchasers is sufficient for the purposes, Ground Rent, i.e. Storage Charges may be recovered after the delivery of the stores.

- Weighment and Delivery.: All materials sold shall be weighed or counted before delivery, this being supervised by :

- (1) Stock Verifier
- (2) Stores Supervisor of rank not less than D.S.K. Gr. III
- (3) Representative of the purchaser (if he cares to be present)
- (4) Representative of the Auctioneer (if he cares to be present)
- (5) Weighment should also be witnessed by the authorised representative of RPF.

- The Stock Verifier should count, measure or weigh each lot or part of a lot after comparison of the description and quantity shown in the sale catalogue to ensure that only such kinds and quantities of materials as have been shown in the catalogue are being issued; he should sign the gate passes and Issue Notes in token of such check.

- The Stock Verifier should maintain a Field Book (S 2428) which will be his initial record for recording therein:

- (a) The lot number
- (b) Description
- (c) Rate
- (d) Cart or wagon number, carrying capacity, and owning railway
- (e) Gross Weight, actual tare or wagon or cart
- (f) Net Weight
- (g) Purchaser's name and address
- (h) Particular of realization of value
- (i) Amount of Loading Charges recovered
- (j) Issue Note number and date
- (k) Gate-Pass/Railway Receipt number & date and
- (l) Amount and particulars of remittance of Ground Rent, if any.

- He should sign the issue note after fully satisfying himself that entries made therein agree with those in the field book. The field book should be attested by the Stores Representative making delivery of the goods in token of his having accepted the correctness thereof.

- In giving delivery of scrap material, scrap of non-ferrous items should be weighed on electronic weighing scales and the weight of each consignment should be recorded in detail by the stock verifier in his field book.

- For giving delivery of ferrous scrap empty wagons need not be weighed and the marked are of the wagons should be taken as the weight of the empty wagons. The loaded wagons should be passed over the weighbridge and the difference between the two weights will give weight of the scrap. In his field book, the Stock Verifier who should be present all the time, record the number, carrying capacity and the owning railway (marked) take, gross weight and net weight of the wagons used. He should then seal up the wagons with the special seal supplied to him for the purpose. Particulars of the Railway receipt under which loaded wagons are booked will be recorded subsequently.

- In cases where local delivery is given, the empty and loaded trucks or carts should be weighed and instead of Railway Receipt, particulars of the Gate Pass issued will be recorded. The Issue Note and the Gate Pass should be countersigned by the Stock Verifier.

- Freight Rates: If the purchaser desires to send any of the stores by rail, they will be carried at public tariff rates only.

- Stock Verification: At the conclusion of the delivery of the lot or lots pertaining to the item of scrap, any stock, left over should be verified by the Accounts Department with the book balance and any discrepancies adjusted. Such "left over" stock may be transferred to the bin in which fresh deliveries received since the auction have been stored.

- Monthly lists of Deliveries: The Depot Officer should submit to the Controller of Stores and the Accounts Officer (Stores) monthly verified lists of materials in respect of lots delivered in every month and valuable in-state and stores of special sales e.g. rails, girders & c. as delivered, whether in part or in full.

- **Report of Completion of Auction:** On the completion of the delivery of materials sold in each auction the Accounts Representative should submit a completion report to the Accounts Officer, Stores bringing to particular notice any outstanding features. The Depot Officer will submit a similar report independently to the Controller of Stores and Accounts Officer, Stores.
- **Sale Accounts by Auctioneers:** The Depot Officer should see that the sale accounts are submitted to him by the auctioneers within the prescribed period. He should check the sale accounts, calling for the Treasurer's certificate of payment granted to the auctioneers, for the remittance made by him. If the sale account is found correct and the remittance has been made correctly, the Depot Officer should issue a clearance certificate to the auctioneer in respect of that particular auction and send a copy of the certificate to the Accounts Officer Stores. The Auctioneers' Sale Accounts should be forwarded to the Controller of Stores for transmission to the Accounts Officer.
- **Bills for Commission Charges:** Except in cases where the auctioneers are permitted to deduct their commission charges from sale proceeds of the auctioned material in terms of their agreement the bill for commission charges should be submitted promptly to the Depot Officer concerned for verification and transmission to the Accounts Officer, Stores, for payment, advising the Controller of Stores at the same time.
- **Auctions by other than the Stores Department:** The preliminary arrangements for the auction of materials held in the Divisions or Districts should be made by the Division or District Officers concerned under advice to the Accounts Officer, Stores, and the Controller of Stores.
- **In signifying his approval,** the Controller of Stores should advise the Accounts Officer, Stores, to arrange for a Stock Verifier being deputed to witness the sale. The auctions may be held either departmentally or with the assistance of the railway auctioneers. The detailed procedure to be followed will be the same, mutatis mutandis as in the case of the auction sales conducted by the Stores Department.

- **Allocation of Financial Responsibility:** The financial responsibility involved in the sale of stores by public auction, tender, or direct sale is in respect both of expenditure and of receipts. In the assessment and collection of amounts due to the railway, the responsibility is with the Executive. The responsibility of the Accounts Organisation is confined to seeing that system of collection is suitable and efficient, to verifying by test-check that such a system operates effectively in practice and to examining that the amounts collected are properly brought into account in the railway's books.
- **In the matter of expenditure involved,** the Accounts Department is responsible for seeing that the expenditure is regular and proper and that the system of accounts is such that there can be no loss of railway money, while the administrative and executive officers will be fully responsible for the correctness of the facts in the original documents.

### **Post Stocking**

- **Issue of Stores:** All issues should be made on written requisitions submitted on the prescribed form by the indenting parties.
- **Ward Procedure:-** The wards should be careful to issue stores expeditiously and exactly as requisitioned for both as regards specification and quantity. Issue of stores are classified under following heads:-
  - Issues to Revenue & Capital (Open line)
  - Issues to workshop
  - Inter depot transfer
  - Issue to other Railway

### **Stock Card**

- Bin Card (Maintained by Ward keeper)
- Numerical Ledger Card (Maintained by Depot Stores Keeper Ledger Section)
- Priced Ledger (Maintained by Accounts Office).

### **Stores Issued on Loan:-**

- **Issue to stores on loan to other railways** should be witnessed by Accounts representative and relevant issue noted counter-signed by gazetted officer of stores department should be allocated to Misc. Advances Account.
- **Disposal of overstock and surplus stocks of stores:-** Overstock and surplus stock of a railway should be finalised either by sale or issue to other railways.

## Audit

- Guide Lines for what to see and how to see during Audit are to be seen.
- Audit is to see that-
  - A high standard of public morality of sound financial Administration has been ensured.
  - Whether the sanctioning and spending authorities have an observed economy.
  - The expenditure is just to suit occasion, as prudence would demand.
  - The rate and scale of expenditure is justified as per circumstance.
  - Where the detailed programme in respect of indent, tender, contract, P.O etc. are not adhered to the reason and without effect.
  - Avoidable delay in finalisation of procurement of stores due to inefficient handling, planning, co-ordination resulting in loss of revenue.
  - Whether there is any wasteful expenditure due to lack of co-ordination between Stores Department and consuming department of the Railways.
  - How far the result anticipated has actually been achieved?
  - How far the physical targets have been achieved within the estimated time and budget?

## Central Audit

- The audit of stores Accounts should be conducted as per instructions laid down in the relevant code and manual issued by C&AG of India from time to time.

## Auditing Objectives

- The basic objectives of auditing stores expenditure are –
  - To ascertain correctness of accounts relating to expenditure.
  - Assessment of Economy, Efficiency and Effectiveness of the outlay.

## Audit of Stores Bill

- The selection of stores bills either from journal or from register of bills maintained as per para 826 of code for the Stores Department.

## Audit of Purchase Order

- Purchase orders in the office of COS and stores contracts are to be reviewed to see that-
  - There is no intentional splitting up of the purchase.

- Direct purchase rare to meet emergent requirements only.
- The financial limits are not exceeded.

## Audit of Tenders and Contracts

- The execution of accepted tenders for the purchase of stores and for works after the delivery of stores or the completion of the work included in the tender should be reviewed.
- Railway Boards' tenders and contracts for cast Iron and Steel Sleepers, rolling stock and other materials are reviewed by the C&AG of India.

## Review of Purchase Policy and Scrutiny of Stores Contracts

- It should be seen that –
  - Tenders for import of materials are floated after obtaining clearance from DGTD/Deptt. Of Electronics and release of foreign exchange.
  - Railway's proposals to the Railway Board for release of foreign exchange were fully justified.
  - That materials after import do not remain unused for long
  - In order to obtain competitive offers and avoid future claims from the supplier a pre-determined price variation clause within an upper ceiling of the contract is prescribed.
  - Whether contract prices are settled taking into account the assistance from the Railways and suitable safeguard are provided.
  - Proprietary certificates are not issued as a matter of course but only after adequate exploratory action to locate after a native source has proved abortive and for items, which are monopolies of single and / or a limited number of firms. Steps are taken to develop alternative source of supply so as to generate competition in price.

## Review of Purchase Policy and Scrutiny of Stores Contract

- The purchase of stores for Railway is governed by the rules contained in chapter III – XI of Indian Railway Code for the Stores Department. Briefly, the policy is to make the purchases of stores for public service in such a way as to encourage the development of the industries of the country to the utmost possible extent consistent with economy and efficiency.



## Audit of Tenders and Contracts finalised by Railway Board

- Purchase of Rolling stock and their components, track materials is arranged by Railway Board while audit of tenders and contracts finalised by Railway Board is to be conducted by Railway wing in Headquarters office. The Principal Director of Audit office should also review the execution of such contract to see:

- Payment for supply by the nominated FA&CAO are in accordance with the terms and conditions of the contracts.
- Replacement with the materials of requisite standard in respect of defective supplies and not conforming to specification.
- Prompt report to the suppliers and Railway Board for enforcing warranty claims.
- Loss, inconveniences etc. suffered by consignee Railways.
- Short/delayed supply.
- Emergency purchase at higher rate from the same firm defaulted in supply against running contract.

## Accumulation of Stores

- Generally for each article or class of articles Administration prescribes the quantities, which should be reviewed periodically to see that there is no prima facie unnecessary accumulation of stores and consequent looking up of capital.

## Custody of Stores

- It should be seen that stores meant for specific work are not obtained unduly in advance of the time when they are likely / actually to be required and the transfer of materials left over, if any, on completion of specific works to some other works and necessary adjustment are not unduly delayed.

## Competition

- Any undue tendency on the part of executive authorities to specify particular make of article or particular firms resulting in restricting the field of competition should be taken up cautiously with the Administration. The matter being reported to the Railway Wing in Headquarters office at the same time.

## Stores Purchase Bill

- The purchase of stores should be checked to see –
  - Particulars agree with the purchase Orders and the accepted tenders.

- That the receipt of stores has been duly acknowledged.
- That the arithmetical calculations are correct.
- Precaution taken against passing of second bill for the same stores.
- That there is no intentional splitting up of purchase.
- That recourse is had to such purchase rarely and to meet emergent requirements only and
- That the financial limits are not exceeded.

## Check of Completeness of Accountal

- With a view to ensuring the completeness and correctness of account of transaction in a store Depot, the following points should be seen –

- Whether the total number of vouchers sent by wards is equal to the number per edit list plus the number of vouchers rejected
- That the manual lot totals are reconciled invariably with the hash totals developed by the computer.
- Vouchers sent to the wards for correction should be returned for position within a reasonable time. Abnormal delay in returning them should be taken up.
- The opening number in the continuity statement of vouchers printed on the computer should be agreed with the closing number as per preceding month's statement. Adequate action should be taken to bring the missing vouchers to account.
- The residual statement printed on the computer should be reviewed and adequacy of action taken watched.
- The computer printed list of items with more than 20% examined with a view to locating cases of incorrect posting or programming errors.

## Primary Inputs (receipt and issue)

- The receipts and issue notes including the stock verification reports constitute the primary inputs into the computerised system. At the end of the month the depot sends to the Accounts Office a summary statement of vouchers prepared during the month for each ward indicating the opening and closing number of the vouchers.

## Computerised system of Stores Accounts

- **Stores Master File**-The basic files are maintained in the computerised system of stores Master file. The Master File indicates Depot Code, P.L.No., Category Ward, Unit, Quantity Value Balances and Book Average Rate, last date of issue and stock verification etc. This file is updated by monthly transactions.

## List of Stores Transaction Couchers

- Cards punched from the vouchers are run through the computer periodically for scrutiny and printing the lost totals as computed manually and worked out on computer in a statement called " List of Stores Transaction vouchers. A statement "called" continuity check of receipts/issue vouchers for the month is printed and sent to Accounts Office for supply of omissions.

## Receipts from Workshop –

- The following points should be seen –
  - Priced issue notes with regard to the requisition rates.
  - Acknowledgement by the Depot.
  - Posting into the ledger.
  - Posting into the total issue notes into the stores journal.

## Check of Arithmetical Accuracy

- The arithmetical accuracy of receipt, issue and other vouchers should be checked in 50% of the cases selected for audit. Some check should be applied to calculation of book average rate.

## Check of Returned Stores

- Stores may be returned owing to excess issue in the first instance or as materials taken from the lines during repairs and renewals. During check of returned stores the following should be seen:
  - The reasonableness of the rate at which credit is afforded to works.
  - The correctness of the allocation of credit.
  - The returned stores are properly taken into account in the priced ledger / transaction Register.
  - In respect of returned stores where the returning Department and stores Department are not willing to accept same quantity and category etc. reasons for the differences and reconciliation should be watched.

## Imported Stores

- It should be seen that –
  - The Letter of Credit is not made operative until the Performance Guarantee Bond as stipulated in the contract is furnished by the supplier.
  - The Bill of Lading is not prepared prior to inspection of the material by the inspection authority.
  - No payments are allowed against Bill of Lading antedated to inspection.
  - The reimbursement claim of the Banks accepted by the Financial Advisor & Chief Accounts Officers is a proper charge against the Railways and has been correctly adjusted.
- As regards port and custom charges, it should be seen that –
  - They have been countersigned by the Controller of Stores.
  - Their allocation is correct.
  - The details of the bills (for custom charges) agree with those in the bills of lading and tonnage statement.

## Delivery Notes :-

- These vouchers consist of
  - Issues to revenue and capital
  - Issues to workshops
  - Inter depot transfers
  - Sale issue notes
  - Misc. issue vouchers such as fabrication, loan issue notes etc.

## Check of Delivery Notes

- The vouchers pertaining to the date selected should be checked as regards, correctness of rates and allocation and traced into the priced ledger/transaction register. In scrutinising issues on sales it should be seen that.
  - The purchase money is paid in advance if the sale is made to outsiders.
  - Percentage charges have been correctly levied.
  - Only surplus/condemn articles are sold to railway employees.

## Tracing of vouchers into the statements generated on the computer

- The postings of audited vouchers should be traced into the following statements:
  - Purchase & sales statement
  - Returned stores statement.

- Depot transfer Receipts & Depot Transfer issue.
- Debits/Credits to Misc. Adv Cap
- Deposit Misc. statement.
- Book Transfer statement.
- Accounts stock verification statement.
- Departmental stock verification statement
  - Depot stock sheet loss etc.
  - Stock adjustment Account statement.

### **Inter Depot Transfer :-**

- The receipts are correctly priced at the corresponding issue vouchers rate.
- The issues and receipts are paired and necessary action is taken to watch the acknowledgement of outstanding items.
- If not paired during the month it is reflected in the stores in transit (Depot Transfer).

### **Priced Ledger/Transaction Register**

- The correctness of the carry forward of the opening balance on the cut off date should be test checked as prescribed by the competent authority.
- The priced ledger may be reviewed with reference to the periodical listings by the computer.

### **Managerial Statements Prepared on Computer**

- The review of priced ledger should be supplemented by the review of following managerial statements :
  - Review of non- moved accounts showing the items not moved over two years over one year etc.
  - Review of P.L Accounts having irregular balance.
  - Scrap statement
  - Report on value/volume analysis to pin point accounts.
  - Statement showing no issues for a certain period as fixed by stores depot.
  - Statement showing stock holding over one year requirement.

### **Reconciliation of Priced Ledger with General Books**

- It may be ensured that procedure of reconciliation of priced ledger with general books provides for a monthly reconciliation of
  - Class summaries with Departmental summaries.

- Debits/Credits and balance in the class ledger with those appearing in the General Books.

- The balance in the priced ledger with those in the General Books.

- Check of stores Journal :

- Journal slips relating to stores transactions should be scrutinised in the manner laid down in para 377 g. It should be seen that journal is properly posted and that the reconciliation of the subsidiary books with the journal and the latter with the general books of the railway is made monthly and certified to as being completed.

### **Priced Ledger/Transaction Register**

- It should be seen that
  - the rates at which the stores are borne on the books are in accordance with the rules on the subject.
  - book losses depreciation etc of substantial amounts have been regularly written off.
  - the average annual consumption and the normal balances are suitably related to each other.
  - the nomenclature is correct.
  - Reconciliation is effected every month or at such intervals as the rules on the subject may prescribe.

### **Audit of Stores Ledger and Annual Review**

- The audit of stores ledger and the annual review of balance should be conducted in such a manner as to bring to notice cases of irregular and unnecessary purchase of stores.
- It should be seen that
  - there are some procedures for systematic store keeping control
    - the quantity ordered on each occasion is based on accurate data and correctly calculated
    - Information is obtained from departmental officers so that there is proper co ordination between the stores and consuming department
    - Cases of non-accountal of receipts and excessive issue without physical movement in the closing month of the year.

### **Suspense register-stores in transit**

- The register should be reviewed to see that outstanding items are cleared promptly.

### Stores Account Current

- The monthly account current of stores transactions, where account as prepared by Accounts Branch, should be examined in full details.
- The opening balance should be compared with the closing balance of the previous month.
- The debits and credits should be examined and traced from the debit and credit summaries.
- The closing balance should be proved by ascertaining the items of which it is composed with reference to debits and credits summaries printed depot wise.
- It should be seen that the balances in the stores account current are reconciled with corresponding balances with general books on one hand and with balances in the class ledgers on the other. The total receipts and issues during a month should be similarly reconciled.

### Deposit Miscellaneous and Miscellaneous Advance Register

- It should be seen that cases of chronic outstandings are not on the increase and all out efforts are made to clear old items.
- In all these cases, it should also be seen that a systematic reconciliation is made with the General Books.

### Yearly Statement of Stores Transactions

- During check of the above mentioned statement the following points should be seen:
  - That this statement is prepared in the prescribed form.
  - That the money value of the stores in hand is classified under each important head.
  - Values are shown separately for ordinary stores, special work and for surplus stores.
  - Whether stock of ordinary stores are much in excess of those fixed by Railway Board.
  - Whether stores for special work were obtained long before the necessity.
  - Stores for special works are issued to works concerned and charged off.
  - Prompt action is being taken to dispose of surplus stores at a reasonable price.

### Purchase Register

- It should be seen that

- The registers (for imported purchase and Indigenous) are efficiently maintained.
- All items are current and are for bills payable for articles received.
- Concession is allowed only under orders of competent authority.
- There is no difference between the entries in the purchase register with computer printed statement of purchase.
- Actual of long outstanding should be brought to the notice of FA&CAO.

### Sales Register and Abstract

- It should be seen that
  - sales have been made under competent authority.
  - The proper percentage charges have been added to the book value.
  - The correctness of the entries in the sales register should be verified with reference to the computer printed sales statement.

### Stock Adjustment Account

- In reviewing this register it should be seen that the adjustments are mainly on account of excesses or deficiencies discovered in actual stock or due to discrepancies in values and that prompt action is taken to clear all the items as early as possible. The outstanding in March accounts should be carefully examined.

### Auction Sale Account

- Agreements with the auctioneer in connection with sale of materials should be examined.
- The price realised at one sale should be compared with the prices realised for similar articles at other sales.
- It should be seen whether before selling stores to the public there is any system of sending to other railways lists of surplus stores.

### Account Current and out-turn statement of the Printing Press

- The entries in the account current should be checked with reference to the statement of debit and credit summaries printed on the computer.
- The system of billing for forms supplied as well as the outstanding bills should be reviewed.

## Accounts Custody and Disposal of Scrap Materials

- During scrutiny of the arrangements for the custody of scrap materials, these should be watched that-
  - The procedure adopted for and during auction of the scrap.
  - The rates fixed and those obtained during auctions.
  - The procedure for verification of scrap especially valuable scrap.

## Stock Verification

- It should be seen that-
  - Verification is done as per prescribed periodicity and sufficient justification exists for relaxing the periodicity.
  - Whether there is a regular verification by actual count or measurement or weighing.
  - The instructions contained in stores code for bulky and heavy materials like steel plates channels, beam etc. are properly followed.
  - If there is any wide variation between book and ground balances of ferrous scrap.
  - Whether the accuracy of the weighing bridges and other weighing machines is periodically tested by the executive and a record is maintained of such test.
  - That no improper use is made of the stock adjustment account and in the case of shortage, that adequate disciplinary action is taken against the person responsible for it and the loss is regularised under the orders of competent authority.

## Account Current and out-turn Statement of the Printing Press

- It should be seen that where work has been done for other Govt. departments of foreign railways charges for supervision, maintenance and depreciation of machinery and fixed percentage of indirect charges are billed according to rules and orders in force. The out-turn statement should be checked during local inspection of the printing press.

# Illustrations

## ***Illustration-I***

(Based on Para 4.3.8 of Audit Report 2002)

### **Railway Board, Eastern and South Eastern Railways: Excess procurement of Rolled Steel Sleepers**

- The Ministry of Railways (Railway Board) placed a contract No.Track/21/91/0602/7/50693 dated 9 August 1991 on M/s Hindusthan Development Corporation Ltd., Kolkata for manufacture and supply of 57,500 Broad Gauge (BG) Rolled Steel Sleepers at Rs.1.38 crore excluding the cost of free supply item (crossing sleeper bars - 6001.100 Metric Tonne (MT) worth Rs.5.89 crore) and freight charges. These sleepers were meant for Eastern and South Eastern Railways. Delivery of 50 per cent of the ordered quantity was to be made within 6 months from the date of issue of order by 8 February 1992 and the balance quantity within next three months by 8 May 1992.
- The delivery of sleepers was badly delayed due to delay in supply of crossing sleeper bars by Steel Authority of India Limited (SAIL) against the orders placed by the Railway Board and also due to non-availability of wagons for transportation of sleepers to consignee Railways. Crossing sleeper bars were to be supplied to the firm as 'free supply' items. The delivery of 57,500 BG rolled steel sleepers was completed in April 1993 and Railway-wise distribution of the sleepers was as shown below

<b>Railway</b>	<b>Description of sleepers</b>	<b>Quantity despatched (In numbers)</b>
Eastern	Rolled Steel Sleepers (60kg) Drawing No.RDSO/T-2564	3,000
	Rolled Steel Sleepers (60kg) Drawing No.RDSO/T-3069	9,000
	Rolled Steel Sleepers (52kg) Drawing No.RDSO/T-3573	15,500
South Eastern	Rolled Steel Sleepers (60kg) Drawing No.RDSO/T-3069	30,000
<b>Total</b>		<b>57,500</b>

- Audit scrutiny of utilisation of sleepers revealed the following deficiencies:
  - The delivery of 57,500 BG rolled steel sleepers was delayed due to delay in supply of crossing sleeper bars and delivery was completed in April 1993. In January 1992, the Railway Board decided that no BG rolled steel sleepers would be procured. Therefore, the Railway Board could have reduced the quantity of rolled steel sleepers ordered in August 1991. No effort was made by the Railway Board to reduce the quantity.
  - Out of 12,000 sleepers (60 kg) allotted to Asansol Division of Eastern Railway without vetted indents, receipt of 10,100 sleepers could be verified in audit from the records though payment for 12,000 sleepers was made by Financial Adviser and Chief Accounts Officer (RBC), Kolkata between December 1992 and April 1993. The cost of 1,900 sleepers lost in transit was Rs.0.27 crore. Out of 10,100 sleepers received, only 4,330 sleepers could be utilised upto October 1999. The balance 5,770 sleepers (worth Rs.0.82 crore) are lying with Division.

- Out of 15,500 rolled steel sleepers (52 kg) allotted to Dhanbad Division of Eastern Railways, 7790 sleepers costing Rs.1.11 crore could not be utilised. These were lying unused since their receipt in April 1993 even after completion of the project in December 1996 for which these sleepers were procured.
- Audit scrutiny further revealed that out of 30,000 rolled steel sleepers (60 kg) received by three Divisions of South Eastern Railway [Waltair (22,000), Nagpur (5,000) and Chakradharpur (3,000)], only 24,894 sleepers could be utilised by the Railway. Out of the remaining 5,106 sleepers, 2,353 (worth Rs.0.34 crore) were lost in transit while being transported from Public Works Inspector (PWI)/ Bano (Chakradharpur Division) to PWI/ Khangsara (Bilaspur Division) in March 1995. The remaining 2,753 sleepers (worth Rs.0.39 crore) were surplus with the Railway since April 1993.
- Thus, incorrect assessment of requirement of rolled steel sleepers resulted in excess procurement of 16,313 sleepers (worth Rs.2.32 crore) apart from 4,253 sleepers (worth Rs.0.61 crore) lost in transit.
- The matter was brought to the notice of Railway Board in May 2001; reply has not been received (October 2001).

**Question:**

1. The Railway Administration had an opportunity to reduce the ordered quantity-what was that? Did Railway Administration take that opportunity?
2. Find the numbers of Rolled Steel Sleepers utilized, lost in transit and remaining idle for each Division and show it in a tabular form.
3. Discuss the lack of promptness on the part of Railway Administration which resulted in excess procurement of Rs. 2.32 crore and loss of Rs. 0.61 crore in the shape of lost in transit.

**Illustration-II****(Based on Para 4.3.4 of Audit Report 2002)****Railway Board: Extra expenditure due to incorrect assessment of requirement of Cast Manganese Steel (CMS) crossings**

- To facilitate the transfer of trains from one track to another crossing assemblies are provided on track. A crossing consists of points and splice rails, wing rails and check-rails suitably held together. Cast Manganese Steel (CMS) solid crossings are particularly useful in continuous welding of rails.
- Ministry of Railways (Railway Board) floated open tender on 15 March 1997 for manufacturing and supply of 5,044 numbers of CMS crossings on Pre-stressed Concrete Sleeper (PSC) layouts covering the period 1997-98, 1998-99 and 1999-2000. The requirement of 5,044 numbers of CMS crossings for 3 years was worked out with duly vetted indents of Zonal railways, after taking into account the depot balance of 1,500 numbers and a quantity of 3,956 numbers due from the previous contracts.
- In view of the funds constraint and to keep the inventory to the barest minimum, the Competent Authority cut down the placement of orders for only 1,024 numbers for the year 1997-98 and asked to place the future orders on annual basis.
- Review of tenders finalised during the years 1997-98, 1998-99 and 1999-2000 revealed that against the total requirement of 5,044 CMS crossings, the Railway Board placed order for 10,489 numbers CMS crossings through 3 tenders without ascertaining the quantity available and the quantity utilised during the year. The details are as under:

Year	Opening Balance	Expected supply from previous contracts	Orders placed	Supply received during the year	Actual consumption	Balance available
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
		3956				
1997-98	2810		1024	3162	1626	4346
1998-99	4346		5155	2694	1545	5495
1999-00	5495		4310	4266	3674	6087
<b>Total</b>			<b>10489</b>	<b>10122</b>	<b>6845</b>	<b>6087</b>

- Over and above the orders placed on the regular suppliers, developmental orders for 5,350 numbers CMS crossings (2,800 numbers in 1997-98, 2,500 numbers in 1998-99 and 50 numbers in 1999-2000) were placed, which were outside the vetted and tendered quantity. Of these orders, 1,500 numbers were received and available for consumption.
- The utilisation of CMS crossings depended upon the availability of PSC sleeper turnouts. A review of the procurement of PSC sleeper turnouts by the Railway Board during this period revealed acute



shortage of PSC sleeper turn-outs due to inability of manufacturers to supply the ordered quantity (details in paragraph No.4.3.2 of this Report). Due to acute shortage of PSC sleeper turn-outs, the CMS crossings procured during this period could not be utilised fully.

- The Board failed to link up the procurement of CMS crossings with that of PSC sleeper turnout by making corresponding reduction in the orders placed for CMS crossings. This is despite the fact that the Minister had directed that a balance must be kept in procurement of CMS crossings and concrete sleeper turnouts so that a situation of un-matched balances could be avoided.

Failure of the Board to correctly assess the requirement of CMS crossings, by taking into account the supplies due/ orders placed and the availability of PSC sleeper turnouts resulted in excess inventory in the successive years (1997-98 to 1999-2000).

- Taking 1,500 as optimum inventory balance of CMS crossings, even though this has also been held to be on the higher side by the Competent Authority (MR), Audit has worked out an excess stock balance of 2,846 numbers valuing Rs.20.05 crore at the end of 1997-98, 3,995 numbers valuing Rs.28.14 crore at the end of 1998-99 and 4,587 numbers valuing Rs.32.32 crore at the end of 1999-2000.
- Again, in 2000-2001, without taking cognisance of the balance available and supplies from the regular orders and developmental orders (received and due), the Railway Board placed orders for 6,137 numbers of CMS crossings which lacked justification and would lead to further piling up of inventory for which Railway would be liable to pay dividend to General Revenue at the rate of 7 per cent per annum.
- The matter was brought to the notice of Railway Board in July 2001; reply has not been received (October 2001).

### **Question:**

1 Why Cast Manganese Steel (CMS) crossings are required in the railway track? Upon what other material of the track does the utilisation of CMS crossings depend?

2. What was the first order of 15 March 1997? Why the same was cancelled and what was the effect of this?

3. Discuss the findings of Audit which led to huge procurement of (CMS) crossings.

### Solution to the Illustration I:

1. In January 1992, the Railway Board decided that no BG rolled steel sleepers would be procured. 50% of the above supply of 57500 Rolled Steel Sleepers was to be supplied to the Railways by February 1992 and the remaining 50% by May 1992. Therefore, the Railway Board could have reduced the quantity of rolled steel sleepers ordered in August 1991.

There was no record showing whether any effort was made by the Railway Board to reduce the quantity.

2. The division wise nos. of Rolled Steel Sleepers utilized, lost in transit and nos. remaining idle were as follows:

Sl. No.	Division	Nos. of R S sleepers received	Nos. Utilised	Nos. Remained idle	Nos. Lost in transit
1.	Asansol	12,000	4,330	5,770	1,900
2.	Dhanbad	15,500	7,710	7,790	Nil
3.	Waltair Nagpur Chakradharpur	30,000	24,894	2,753	2,353

3. Initially during the period after January 1992 (when Railway Board decided that no BG rolled steel sleepers would be procured), the Railway Administration had an opportunity to reduce the ordered quantity of 57,5000 nos. against contract No.Track/21/91/0602/7/50693 dated 9 August 1991 on M/s Hindusthan Development Corporation Ltd., Calcutta but this option did not appear to have been explored. Again in the later part Railway Administration did not care much for the un-utilised quantity which was above 28% of the quantity ordered. The estimate of this item was definitely on the high side. Moreover, more than 7% of the ordered quantity was lost in transit because of failure on their own part as transportation of the same was done by themselves.

## **Solution to the Illustration II:**

1. To facilitate the transfer of trains from one track to another, crossing assemblies are provided on track. A crossing consists of points and splice rails, wing rails and check-rails suitably held together. Cast Manganese Steel (CMS) solid crossings are particularly useful in continuous welding of rails. The utilisation of CMS crossings depends upon the availability of Pre-stressed Concrete Sleeper (PSC) turnouts.

2. Ministry of Railways (Railway Board) floated open tender on 15 March 1997 for manufacturing and supply of 5,044 numbers of CMS crossings on Pre-stressed Concrete Sleeper (PSC) layouts covering the period 1997-98, 1998-99 and 1999-2000. The requirement of 5,044 numbers of CMS crossings for 3 years was worked out with duly vetted indents of Zonal railways, after taking into account the depot balance of 1,500 numbers and a quantity of 3,956 numbers due from previous contracts. But in view of the funds constraint and to keep the inventory to the barest minimum, the Competent Authority cut down the placement of orders to only 1,024 numbers for the year 1997-98 and asked to place the future orders on annual basis. As a result of the above decision, on a review of tenders finalised during the years 1997-98, 1998-99 and 1999-2000, it was revealed that against the total requirement of 5,044 CMS crossings, the Railway Board placed order for 10,489 numbers CMS crossings through 3 tenders without ascertaining the quantity available and the quantity utilised during the year.

3. On a review of the above case it was revealed that while restricting the procurement of 3 years in one time, the Railway Administration increased the procurement of CMS crossings from 5,044 numbers to 10,489 numbers. While assessing the revised need through 3 tenders, no efforts were made for ascertaining the quantity available and the quantity utilised during the year. However, the requirement of 5,044 numbers of CMS crossings for 3 years was worked out with duly vetted indents of Zonal railways, after taking into account the depot balance of 1,500 numbers and a quantity of 3,956 numbers due from the previous contracts. Moreover, the utilisation of CMS crossings depended upon the availability of PSC sleeper turnouts. A review of the procurement of PSC sleeper turnouts by the Railway Board during this period revealed acute shortage of PSC sleeper turn-outs due to inability of manufacturers to supply the ordered quantity. Due to acute shortage of PSC sleeper turn-outs, the CMS crossings procured during this period could not be utilised fully. The Board failed to link up the procurement of CMS crossings with that of PSC sleeper turnout by making corresponding reduction in the orders placed for CMS crossings. This is despite the fact that the Minister had directed that a balance must be kept in procurement of CMS crossings and concrete sleeper turnouts so that a situation of un-matched balances could be avoided.


Taking 1,500 as optimum inventory balance of CMS crossings, even though this has also been held to be on the higher side by the Competent Authority (MR), Audit has worked out an excess stock balance of 2,846 numbers valuing Rs.20.05 crore at the end of 1997-98, 3,995 numbers valuing Rs.28.14 crore at the end of 1998-99 and 4,587 numbers valuing Rs.32.32 crore at the end of 1999-2000.

Again, in 2000-2001, without taking cognizance of the balance available and supplies from the regular orders and developmental orders (received and due), the Railway Board placed orders for 6,137 numbers of CMS crossings which lacked justification and would lead to further piling up of inventory for which Railway would be liable to pay dividend to General Revenue at the rate of 7 per cent per annum.

Slide 1

**Session: 7**

**Audit of Railway Stores**




Training Module on Audit of Railways; Session:7

Slide 4

**Basic Concepts**

- The items of stores are procured from different/branches.
  - ◆ Direct purchase by the Administration (Controller of Stores).
  - ◆ Purchase through Directorate General of Supplies and Disposals.




Training Module on Audit of Railways; Session:7

Slide 2

**Learning Objective**

- In this session, the participants will be able to understand the basic concepts of the function of the Stores department in Indian Railways which will help them to focus on audit issues in the practical work context.




Training Module on Audit of Railways; Session:7

Slide 5

**Classification of Stores**

- Stock Items-
  - ◆ which are kept in the custody of the Stores Department and whose unit cost justifies incurring inventory carrying cost associated with these items.
- Ordinary stores-
  - ◆ which have a regular turnover caused by a constant demand.
- Emergency stores-
  - ◆ Stores which are stocked to meet emergencies.




Training Module on Audit of Railways; Session:7

Slide 3

**Basic Concepts - Organisation**

- Controller of Stores
  - ◆ Controls of the management of stores is vested in the Controller of Stores.
- He is responsible for the-
  - ◆ Purchase and Inspection of Railway Stores
  - ◆ Custody and Issue of Railway Stores
  - ◆ Issue and Maintenance of updated Nomenclature-cum-Price List
  - ◆ General Supervisory Control of Stores and
  - ◆ Purchase of Stores.




Training Module on Audit of Railways; Session:7

Slide 6

**Classification of Stores**

- Special Stores-
  - ◆ Stores required for special work and purpose and are not stocked in Department.
- Surplus Stores- divided into two types-
  - ◆ Movable Surplus-
    - ◆ Stores which have not been issued for a period of 24 months, but will be used in the near future are called as such.
  - ◆ Dead Surplus
    - ◆ Stores which are not likely to be utilised on any railways within next two years are termed as such.




Training Module on Audit of Railways; Session:7

Slide 7

**Funds in Stores Department**

- The funds sanctioned each year for purchases are in respect of :
  - ◆ Stores for Capital works;
  - ◆ Stores for works chargeable to Depreciation Reserve Fund, Development Fund, & Open Line Works Revenue; and
  - ◆ Stores required for general purposes.




Training Module on Audit of Railways; Session:7 7

Slide 10

**Stores Accounting**

- Revenue Accounts are classified as -
  - ◆ Working Expenses
  - ◆ Revenue Abstracts
  - ◆ Miscellaneous Advances
  - ◆ Deposit Miscellaneous
  - ◆ Transfer Divisional
  - ◆ Transfer Railways




Training Module on Audit of Railways; Session:7 10

Slide 8

**Funds in Stores Department**

- A Manuscript Fund Register should be maintained to watch over the incurrance of liabilities against the Budget grant.
- Before placing any order or indent, a certificate regarding availability of funds should invariably be obtained from the Accounts Officer/Stores.




Training Module on Audit of Railways; Session:7 8

Slide 11

**Stores Accounting**

- Annual Accounts submitted by Stores Accounts Office to the Books Section on the prescribed date -
  - ◆ Capital & Revenue Accounts
  - ◆ Finance Accounts
  - ◆ Appropriation Accounts




Training Module on Audit of Railways; Session:7 11

Slide 9

**Stores Accounting**

- The following Heads of Accounts under Capital & Revenue are generally operated upon in the Stores Accounts Office:
  - ◆ Capital:
    - ◆ Major Head: 67A & 67B.
    - ◆ Minor Head: 71 Stores Suspense and 73 Misc Advances.




Training Module on Audit of Railways; Session:7 9

Slide 12

**Bills**

- Internal check of the bills for direct purchase by Controller of Stores are as under:
  - ◆ A check of Purchase Order
  - ◆ A check of Receipt Note
  - ◆ The maintenance of Purchase Accounts Register
  - ◆ by direct payment or
  - ◆ by means of book adjustment.




Training Module on Audit of Railways; Session:7 12

Slide 13

**Check of Bills**

- ◆ Prepared in standard form
- ◆ Marked as original
- ◆ Free from unattested correctives
- ◆ Bear the signature and address of the Vendor
- ◆ Quantity correctly estimated
- ◆ Proper sanction
- ◆ Competitive tendering is adopted
- ◆ Purchase is made from the lowest tenderer, unless there are recorded reasons to the contrary;




Training Module on Audit of Railways; Session:7 13

Slide 16

**Fundamental Principles of Contracts for the purchase of Stores**

- ◆ Items of the Estimates must be precise and definite.
- ◆ Legal and Financial advice should be taken in the drafting of contracts.
- ◆ Standard Form of Contract should be adopted.
- ◆ The Terms of the Contract should not be varied except in consultation with competent financial authority.
- ◆ Reasons should be recorded where lowest tender is not accepted.




Training Module on Audit of Railways; Session:7 16

Slide 14

**Schedule of Rates**

- **New Stores-**
  - ◆ The rates for new stores should be the average book rate or the current market rate whichever is less.
  - ◆ The average book rate is the rate arrived at by dividing the value balance shown in the priced ledger by the quantity balance.
- **Workshop Manufactured Stores-**
  - ◆ The price list rates for workshop manufactured stock items would be the rates fixed half yearly by the Mechanical Department and
  - ◆ The average book and ledger rate will be in the price list rates in force from time to time.




Training Module on Audit of Railways; Session:7 14

Slide 17

**Fundamental Principles of Contracts for the purchase of Stores contd.**

- ◆ Financial status of the firm should be considered.
- ◆ In absence of formal written contract no order for supplies should be placed without a written agreement as to price.
- ◆ Railway right to cancel the agreement at any time after expiry of six months notice in respect of long term agreement should be incorporated.




Training Module on Audit of Railways; Session:7 17

Slide 15

**Schedule of Rates of Scrap**

- Rates for scrap materials should be included in the Schedule of scrap.
- Rates should be revised as frequently as not less than once a year by the Controller of Stores in consultation with the Chief Accounts Officer.




Training Module on Audit of Railways; Session:7 15

Slide 18

**Annual Programme System**

**Time table-**

- before the C.O.S. can estimate the quantities required for the interim period and contract period for the entire railway; he has
  - ◆ to obtain detailed information from Depots of their estimated requirements.
  - ◆ to consolidate the information thus obtained.
  - ◆ to review the current contracts for supplies of stores.




Training Module on Audit of Railways; Session:7 18

Slide 19

**Procurement of Stores**

- As per Indian Railway Code for the Stores Department the Controller of Stores will decide what items are to be procured on maximum / minimum basis.




Training Module on Audit of Railways; Session:7 19

Slide 22

**Suppliers Challan**

- Supplying firms will submit in duplicate a challan along with the materials supplied by them.
- A copy of the challan should also be forwarded to the Purchase Officer.




Training Module on Audit of Railways; Session:7 22

Slide 20

**Agency for Purchase**

- Purchase of materials for the Railway are arranged either-
  - ◆ By the Railway Board or
  - ◆ Directly by the Railway Administration.
- Through the agency of Government Department viz.
  - ◆ The Director General of Supplies and Disposal.
  - ◆ The Controller of Stores.
  - ◆ Government Medical Stores Department.




Training Module on Audit of Railways; Session:7 20

Slide 23

**Combined Receipt & Issue Note Inspection**

- Stores purchased by COS should be inspected by an Inspecting Officer of the Railway.
- Where the materials are despatched directly to an indenter, the indenter is responsible for inspection and for arranging suitable test.




Training Module on Audit of Railways; Session:7 23

Slide 21

**Purchase Procedure**

- The procedure adopted for the ordering, inspection and receipt of stores should provide inter alia for:-
  - ◆ The Accounts Officer/Stores will get a copy of the purchase order duly signed by the officer placing P.O.
  - ◆ The officer of Stores Department receiving the stores supplied will submit Receipt Note to Accounts Office.




Training Module on Audit of Railways; Session:7 21

Slide 24

**Purchase through DGSD & Inspection**

- Except in cases where stores are arranged through the agency of the contractors, item of stores mentioned in Appendix VI of Indian Railway Stores Code are procured through DGS&D.
- All articles except machine tools purchased through the DGS&D should be inspected and tested by that department.




Training Module on Audit of Railways; Session:7 24

Slide 25

**Receipt Notes & Payments**

- Railway Inspection Officer or the Depot Officer concerned should prepare the Receipt Notes in the case of indents on DGS&D or orders against rate or running contracts,
- Pay and Accounts Officer (Ministry of Urban Development) pays all bills for stores purchased by the DGS&D and raises debits against the departments concerned.




Training Module on Audit of Railways; Session:7 25

Slide 28

**Stationery and Printing-Stores and Forms**

**Indent for Stationery**

- The various departments, stations and offices of the railway should submit to the Controller of Stores or the Superintendent Printing and Stationery, the indent of their annual requirements of stationery.




Training Module on Audit of Railways; Session:7 28

Slide 26

**Shortage**

**Regarding**

- any complaint regarding shortages of or damage to stores, indenter should take up the issue with supplying firms and carrier directly.
- The DGS&D should be addressed where indenter is unable to obtain satisfactory reply from the firm or the carrying Railways.




Training Module on Audit of Railways; Session:7 26

Slide 29

**Receipt, Accountal and custody of Stores**

**Receipt**

- Stores are received in a depot through the following sources:
  - ◆ Indigenous Purchases
  - ◆ Imports
  - ◆ Manufactures from Workshop
  - ◆ Returned Stores
  - ◆ Depot transfers etc.,



Training Module on Audit of Railways; Session:7 29

Slide 27


**Stationery and Printing-Stores and Forms**

**Purchase policy**

- The policy of the Government of India is to make their purchases of stores in such a way as to encourage the development of the industries of the country.

**Inspection and Test**

- All articles should be
  - ◆ subject to inspection before acceptance; and
  - ◆ required to conform to such specification and/or to satisfy such test as prescribed.



Training Module on Audit of Railways; Session:7 27

Slide 30


**Receipt, Accountal and Custody of Stores** contd.

**Payment of Stores Bills -**

- The Stores Bills are discharged either
  - ◆ by direct payment, or
  - ◆ by means of book adjustment.

**Stock verification:-**

- Stock verifications are of two types -
  - ◆ Accounts Stock verification
  - ◆ Departmental Stock verification




Training Module on Audit of Railways; Session:7 30



Slide 31

**Audit Points - Stores Bill**

- The selection of Stores bills either from Journals or from Register of Bills maintained as per para 826 of Code for the Stores Department.




Training Module on Audit of Railways; Session:7 31

Slide 34

**Audit Points on Purchase Policy and Scrutiny of Stores Contracts**

- ◆ That materials after import do not remain unused for long
- ◆ In order to obtain competitive offers and avoid future claims from the supplier, a pre-determined price variation clause within an upper ceiling of the contract is prescribed.
- ◆ Whether contract prices are settled taking into account that suitable safeguards are provided.




Training Module on Audit of Railways; Session:7 34

Slide 32

**Audit Points - Purchase Order**

- ◆ There is no intentional splitting up of the purchase;
- ◆ Direct purchases are rare and to meet emergent requirements only;
- ◆ The financial limits are not exceeded.




Training Module on Audit of Railways; Session:7 32

Slide 35

**Audit Points on Computerised System of Stores Accounts**

Stores Master File-

- Basic Files maintained in the computerised system of Stores Master file.
- Master File indicates Depot Code, P.L. No., Category Ward, Unit, Quantity Value Balances and Book Average Rate, last date of issue and stock verification etc.
- This file is updated by monthly transactions.




Training Module on Audit of Railways; Session:7 35

Slide 33

**Audit Points - Tenders and Contracts**

- The execution of accepted tenders for the purchase of stores and for works after the delivery of stores or the completion of the work included in the tender should be reviewed.




Training Module on Audit of Railways; Session:7 33

Slide 36

**Audit Points on Returned and Imported Stores**

- ◆ Reasonableness of the rate at which credit is afforded to works.
- ◆ Correctness of the allocation of credit.
- ◆ Returned stores are properly taken into account in the Priced Ledger / Transaction Register.
- ◆ Reasons for the differences between returning Department and Stores Department and reconciliation should be watched.




Training Module on Audit of Railways; Session:7 36

Slide 37

**Audit Points on Returned and Imported Stores**

- ◆ The bill of landing is not prepared prior to inspection of the material by the inspection authority.
- ◆ No payments are allowed against bill of landing antedated to inspection.




Training Module on Audit of Railways; Session:7 37

Slide 40

**Reconciliation of Priced Ledger with General Books**

- It may be ensured that procedure of reconciliation provides for a monthly reconciliation of
  - ◆ Class summaries with Departmental summaries.
  - ◆ Debits/Credits and balance in the Class Ledger with those appearing in the General Books.
  - ◆ The balance in the Priced Ledger with those in the General Books.




Training Module on Audit of Railways; Session:7 40

Slide 38

**Tracing of vouchers into the statements generated on the computer**

- The postings of audited vouchers should be traced into the following statements:
  - ◆ Purchase & Sales Statement
  - ◆ Returned Stores Statement.
  - ◆ Depot Transfer Receipts & Depot Transfer issue.
  - ◆ Debits/Credits to Miscellaneous Advance Capital.




Training Module on Audit of Railways; Session:7 38

Slide 41

**Audit Points: Priced Ledger/Transaction Register**

- ◆ The rates are in accordance with the rules;
- ◆ Book losses, depreciation etc of substantial amounts have been regularly written off;
- ◆ The nomenclature is correct;
- ◆ Reconciliation is effected at such intervals as the rules may prescribe.




Training Module on Audit of Railways; Session:7 41

Slide 39

**Tracing of vouchers into the statements generated on the computer contd.**

- ◆ Deposit Misc. statement.
- ◆ Book Transfer statement.
- ◆ Accounts Stock Verification Statement.
- ◆ Departmental Stock Verification Statement
- ◆ Depot Stock Sheet loss etc.
- ◆ Stock Adjustment Account Statement.




Training Module on Audit of Railways; Session:7 39

Slide 42

**Audit Points - Stores Account Current**

- ◆ Should be examined in full details.
- ◆ Opening balance should be compared with the closing balance of the previous month.
- ◆ Debits and credits should be examined and traced from the debit and credit summaries.
- ◆ Closing balance should be proved by ascertaining the items of which it is composed with reference to Debit and Credit summaries printed depot wise.




Training Module on Audit of Railways; Session:7 42

Slide 43

**Audit Points - Purchase Register**

- ◆ The registers are maintained efficiently.
- ◆ All items are current and are for bills payable for articles received.
- ◆ Concession is allowed only under orders of competent authority.
- ◆ No difference between the entries in the purchase register with computer printed statement of purchase.
- ◆ Actuals of long outstanding amounts should be brought to the notice of FA&CAO.




Training Module on Audit of Railways; Session:7 43

Slide 45

**Audit Points - Stock Verification**

- ◆ Verification is done as per prescribed periodicity;
- ◆ Regular verification by actual count or measurement or weighing;
- ◆ Any wide variation between Book and ground balances of ferrous scrap;
- ◆ Weigh bridges and other weighing machines are periodically tested by the executive;
- ◆ No improper use is made of the stock adjustment account.




Training Module on Audit of Railways; Session:7 45

Slide 44

**Audit Points - Sales Register and Abstract**

- ◆ Sales have been made under competent authority.
- ◆ Proper percentage charges have been added to the book value.
- ◆ Correctness of the entries in the sales register should be verified with reference to the computer printed sales statement.



Training Module on Audit of Railways; Session:7 44

# **Session: 8**

## **Audit of Railway Workshop**

<b>Session Title: Audit of Railway Workshop.</b>		Session Guide
<b>Instructor's Guide</b>	Reference	Participants' Response
<b>Session Overview</b>		
<b>Welcome</b> participants to the session and remind them that their active participation is critical for the success of each session.	Lecture	
<b>Learning Objective</b>		
<b>Inform:</b> Given the inputs of the functions of Railway Workshops, their classification, budget grants, accounting procedures, techniques of costing and inventory control through group discussion, lecture and PowerPoint slide show; the participants will at the end of the session acquire knowledge of the basic concepts of an audit of Railway Workshops. This will help them to focus on audit issues in the actual work context.	Lecture	
<b>Basic Concepts</b>		
<b>Discuss:</b> <ul style="list-style-type: none"> <li>● Organisation, Classification, Budget Grant of Railway Workshops, Workshop Accounting</li> <li>● Workshop Modernisation, Performance Investigation</li> <li>● Costing, Suspense, Aspects of Modernisation, Manpower Utilisation</li> </ul>	Lecture and PowerPoint Slide show 'SESSION 8 AUDIT OF RLY.WORK-SHOP'	
<b>Application:</b> <ul style="list-style-type: none"> <li>● Distribute Illustration I with questionnaire</li> <li>● Request the participants to answer the questionnaire.</li> <li>● Distribute the solutions to Illustration-I</li> <li>● Discuss the solutions and elicit the views of participants.</li> <li>● Distribute Illustration II with questionnaire</li> <li>● Request the participants to answer the questionnaire.</li> <li>● Distribute the solutions to Illustration-II</li> <li>● Discuss the solutions and elicit the views of participants.</li> </ul>	Session 8 Illustration I & II and Solution to Illustration I & II	
<b>Summarise:</b>		
<b>Distribute</b> Participants' Note. <b>Tell</b> the participants that during the session, we discussed Organisation, classification, budget grant, workshop accounting and its modernisation, costing, suspense aspects of modernisation etc. <b>Invite</b> questions on themes discussed. If participants have any doubts/clarifications about themes, clarify the same. Answer participants' queries. <b>Thank</b> the participants and bring the session to a close.	Session 8 Participants' Note	

**Training Method:** Interactive Lecture and Power Point Slide Show.

**Materials Required:** Power Point Slides, Projector, White Board Marker, Pen and Participants' Note.

## Session Title: Audit of Railway Workshops

### Session Overview:

- The safety and reliability of the Railway Transport System depends on the proper maintenance of rolling stock. For this purpose, the Indian Railways have 46 Workshops equipped with Plant and Machinery, manpower and infrastructure. These Workshops were, therefore originally established for keeping the rolling stock in good repair condition and for efficient maintenance of Railway equipment. Since the Repair Workshops necessitated use of spare parts and fittings in replacement of the worn out ones, manufacture of such duplicates was also undertaken in Railway Workshops as a regular arrangement, to the extent Workshop capacity was available. Certain selected Workshops, where capacity became available as a result of introduction of incentive schemes, have also been entrusted the work of manufacturing of various types of Wagons. These are involved in the manufacture of Boilers, Locomotives and Coaching Vehicles, Wheels, Tyres and Axles. Subject to availability of the capacity, jobs are also undertaken in Railway Workshops for other Railways, other Government Departments, State Governments, Public bodies and Private individuals.
- There are various 'running sheds', 'sick lines' and 'train examining stations' conveniently situated on the line where different kinds of rolling stock, not undergoing repairs in Workshops, are examined and kept in readiness for immediate use. These running sheds are necessarily parts of the Transportation Department Organisation as distinct from the Mechanical Department. Where the Chief Mechanical Engineer (CME) is responsible finally for the total expenditure on the maintenance and repairs of rolling stock, whether incurred in the Workshops or in the running sheds, he controls the budget for both these voluminous streams of revenue expenditure, whatever may be the actual organisation though the control is indirect, in the case of Railways having divisional longitudes.

- The discussions herein mainly concern the Mechanical Repair Workshops and Production Units.

### Organisation of Railway Workshops

- The Workshops are under the control of the Mechanical Department of the Railways headed by the Chief Mechanical Engineer. The direct control of the officers of the Workshops is exercised by the Chief Workshop Engineer (CWE) who is the administrative head of the Department. The performance of the Workshops is monitored by the Member (Mechanical) in the Railway Board.
- CME is assisted by one or more CMEs of Head of the Department (HOD) rank, Deputy Chief Mechanical Engineers (DCMEs), Works Managers etc. The Chief Works Engineers (CWE) are assisted by Works Managers, Production Engineers, Personnel Officers, Workshop Accounts Officers, Workshops Stores Officers, Electric Engineers and Chemists and Metallurgists.
- Production Units are placed under the charge of a General Manager who is assisted by Chief Mechanical Engineer, Controller of Stores (COS), Financial Advisor and Chief Accounts Officer (FA&CAO), Chief Personnel Officer (CPO), Executive Engineers, Security Officers, Chemists and Metallurgists etc.

### Classification of Railway Workshops

- Railway Repair Workshops are divided into Production Shops and Service Shops. Production Shops are either 'Process Shops' i.e. Manufacturing Shops or 'Job Shops' i.e. Finishing Shops.
- Amongst the Process Shops are the foundries, saw-mills or rolling mills. These may however, be extended to include the forges, smithy and bolt and nut shops. All the other Production Shops if 'Job Shops' are such shops that keep the Production Shop running. Mill Wright, Tool Room and Electrical Repair Shops are such shops. Each shop is allotted a shop number by which it is distinguished. Shops are sub-divided usefully into sections, whenever possible. The shop is the unit not only for purposes of technical control, but also of financial and cost control.

- The broad divisions of Production Units are as under:
  - Production Shops
  - Service Department inside the Workshops
  - Service Department outside the Workshops
  - Stores Department and
  - General Departments
- Separate groups of numbers for each of the above Departments are allotted for purposes of easy identification.
- The Production Units in the Indian Railways are:
  - Chittaranjan Locomotive Workshops, Chittaranjan
  - Diesel Locomotive Workshops, Varanasi
  - Integral Coach Factory, Perambur
  - Diesel Component Works, Patiala
  - Wheel Tyres and Axle Plant, Bangalore
  - Rail Coach Factory, Hussairpur, Kapurthala.

### **Stages prior to Workshop Performance**

- Before execution of any work in a Workshop the following are basic pre-requisites:
  - Preparation of Rolling Stock Programme (RSP)
  - Preparation of Revised & Budget Estimates
  - Detailed Estimates for Works to be undertaken
  - Budget Grants and Appropriations & Re-appropriations.

### **Rolling Stock Programme (RSP)**

- The Rolling Stock Programme is drawn up for each year based on the Annual Action Plan under the Five Year Plans formulated after consultations with Steering Groups representing various economic ministries and the recommendations of the Working Group convened by the Ministry of Railways under the aegis of the Planning Commission
- Provision for new rolling stock is made at least 3 years in advance in case of locomotives and 2 years in advance in case of wagons and carriages
- It is prepared by the COMs, seen and supplemented by the CME, approved by the General Manager and submitted to the Railway

Board. It is vetted by Accounts Office in regard to its allocation and the financial justifications etc.

- The Railway Board after discussion with the General Manager will decide upon the final programme.

### **Authorised Rolling Stock**

- Each Railway Administration is authorized by the Railway Board to keep a specified number of Rolling Stock.
- It is reduced when the stock is not required in the near future.
- In such a case, an estimate is prepared writing down the original cost from Capital to DRF.

### **Estimates for Manufacturing Operation**

- The estimate is prepared and compiled in FORM W.1551 and submitted to CME. The form provides for inclusion of items relating to Printing Press and Engineering Workshops (including opening and closing balances relating to such items, though not shown separately)
- Similarly Revised Estimates and Budget Estimates for working expenses are also prepared and sent to the General Manager for transmission to the Railway Board.

### **Budget Grants, Appropriation and Reappropriation**

- Expenditure on each individual work should be covered by a Budget Provision or Appropriation
- In March each year or earlier if decided by the General Manager a final re-appropriation statement showing the revised requirements for each work as compared with the Budget provision should be submitted through the Workshop Accounts Officer to the General Manager for sanction.
- A similar final re-appropriation statement for funds required under Sub and Detailed Heads under Revenue Demands should be submitted to the General Manager for his sanction in March.

### **Grant Register**

- The grants communicated by the General Manager and the CME from time to time is entered in a Grant Register (W.1557) under several heads for which they are allotted.
- The entries are attested by a Gazetted Officer.

- All appropriations and re-appropriations are sanctioned by the competent authority.

Note:-

In view of the resource constraints substantial replacements of Rolling Stock have fallen into arrears. To tide over the situation a system of Leasing Rolling Stock from a PSU—Indian Railway Finance Corporation (IRFC) specially floated for the purpose has been introduced. IRFC raises funds through Bonds from the public and the funds so raised are made available to the Railways to procure rolling stock for and on the cost of IRFC. Such rolling stock is utilized by the Railways against payment of annual leasing charges to IRFC. The itemized rolling stock programme finalized and approved by the Railway Board lists the stock distinctly for the items to be procured (or manufactured) on IRFC account.

### Funds in Railway Workshops

- The Revised and Budget estimates for construction, acquisition and replacement of assets are known as Budget (Works).
- The requirement of funds both for new constructions and for works in progress are submitted in the form of “Demands for Grants” in the Works, Machinery and Rolling Stock Programme which forms part of the Budget Papers presented to the Parliament.
- The Inventory Budget viz., Stores-in-Stock, Works in process for Workshops and Production Units, other Stores transactions such as Purchase, Sales & Miscellaneous Advance (Capital) are parts of Demand No.16---Asset Acquisition, Constructions & Replacements.
- The Budget for Working Expenses are submitted to General Manager through the Chief Mechanical Engineer.
- The Demands concerned are as under:-
  - Demand No.5---Repair and Maintenance of Motive Power
  - Demand No.6---Repair and Maintenance of Carriage and Wagon
  - Demand No.3---General Repair Maintenance and Services
  - Demand No.7--- Repair and Maintenance-Plant and Equipment

- Demand No.11---Staff Welfare and Amenities

- The Budget sent as above is communicated by the Railway Board through ‘Budget Orders’ to the General Manager who distributes fund grant wise to the different spending agencies for incurrence of expenditure throughout the year.

### Railway Workshop Accounting

Following classes of expenditure are adjustable during the month in which the expenditure is incurred.

- Expenditure on Works of Mechanical Department charged to Capital, Development Fund, OLWRs and DRF
- Expenditure on Revenue Works of Mechanical Division/Department.
- Expenditure on Deposit Works
- Expenditure debitable to other Railways in respect of repair to their Rolling Stock.

### Workshop Account Current

- This is Prepared Monthly in Form W.1215 in each Workshop. Since the manufacture in the Production Units vary from unit to unit, no standard form for use by them in respect of Account Current is prescribed. The Production Units are left free to devise their own form for the purpose to suit their local conditions.

### Workshop General Register (WGR)

- This is a Subsidiary Register containing details of account of all Work Orders (authority for Commencement of Work) operated under Workshops Manufacturing Suspense Account (WMS).
- Direct Labour expenditure is posted against Work Order (W.O.) from Labour Sub Ledger
- Direct material cost is posted from Stores Sub-Ledger
- Miscellaneous charges are posted from Misc. Sub-Ledger
- Shop On Cost and General On Cost (Labour and Stores) calculated on pre-determined percentage are posted as debits in WGRs except General On Cost and Shop On Cost orders which record corresponding credits.
- Proforma On Cost whenever leviable are also calculated and posted in the WGR
- Total debits in respect of each Work Order under Labour Stores and On Cost charges are



struck in the WGR and transcribed to the Out-turn Statements

- Credits in WGR are posted from Issue Notes, Bill or Debit Schedule
- Up to date total in the WGR are struck and the outstanding balances worked out
- These balances are tallied with corresponding balances in the Out-turn Statement Part-II
- The Closing Balance in the Out-turn Statement indicates the balance outstanding under Workshop Manufacturing Suspense (WMS) Account.
- Reconciliation of balance under WMS Account as per General Books and Out-turn Statement Part-II
- After summing up, the Workshop Account falls into the following classes:-
  - Direct charges for Labour
  - Direct charges for Stores and
  - Shop General and Proforma On Cost

### Workshop Bills

Following are the bills which are normally admitted for pre-check in Workshops and Stores Accounts.

- Labour Pay Sheets of the Workshop Staff
- Computerised Pay bills of Officers and Staff
- Overtime bills of the Workmen
- Bonus and Piece Work bills
- Computerised Incentive bills
- Bills for Stores purchased
- Contractors' Bills
- All the bills are submitted in prescribed Forms and the initial documents are invariably attached to the bills to ensure correct payments.

- In cases of supply the payment is not permissible until the stores have been received and found in good condition.
- Before payment, qualities of work/supply should be scrutinised according to the rates/specifications as per agreements.

### Incentive Schemes in Railway Workshops

- Railway Board in 1949 took a decision to introduce some form of incentive scheme in Railway Workshops to afford direct financial incentive to workers who exceeded a minimum level of performance
- Time is the basis of this scheme and time standards used were predetermined after systematic work measurement
- Amount of incentive bonus earned is calculated with reference to the "Standard Hourly Rates" determined by the Railway Board from time to time
- The Incentive Workers are classified as Direct, Essential Direct and Indirect Workers. Supervisors upto the rank of Charge man A Grade are included in this category.
- Formula for fixing incentive is Minimum of Time Scale
- Ceiling limit on the profit is fixed at 50% in respect of each job of operation to the lower category of Workmen
- In case of Supervisor this is restricted to 80% of the average percentage of profit earned by direct workers supervised by them
- For idle time arising out of
  - Lack of work and
  - Lack of tools proportionate deductions should be made from the incentive bonus as under in respect of Charge-man /Mistry

Idle time	% of IB to be debited
2% & above but less than 5%	10%
5% & above but less than 15%	20%
15% & above	No Incentive Bonus

### Workshop Modernisation

- Central Organisation for Modernisation of Workshops (COFMOW) was established in 1979 to implement the Modernisation Programme of

Workshops in three phases. It has emerged as a specialized organisation on machine tool technology. It has prepared (till March, 1995) 845 technical specifications for sophisticated tools, evaluated over 3450 offers of machine tools from Indian and Foreign suppliers and

procured Machinery & Plant worth Rolling stock.578 crores. It is now extending its role to new areas, some of which are:

- Conversion of Meter Gauge (M.G.) machines for use in Broad Gauge (B.G.) in view of 'unigauge' policy of Indian Railway
- Plan for rebuilding/reconditioning of older machines to avoid procurement of new machines
- Procurement of Machine & Plant for the Ministry of HRD for modernization of Polytechniques
- COFMOW has undertaken the work for preparing reports on
  - Disposal of surplus machines
  - Evolving a standard layout and list of M&P required for roller bearing section for coaching stock
  - Preparing a standard layout of facilities for overhauling and maintenance of draft gears.

### Performance Investigation

- With the changing pattern of developmental programmes and welfare activities in different spheres of Railway working, following instances may be usefully investigated to yield the gainful results in audit of Railway Workshops and Production Units.

#### MACRO ISSUES

- Installed Capacity
- Production Targets
- Actual Out-turn
- Costing Study
- Modernisation
- Technology transfer-tie-up-adaptability

#### OPERATION

- **Machinery & Materials**
  - ✓ Procurement
  - ✓ Maintenance
  - ✓ Utilisation
  - ✓ Replacement & Renewals
  - ✓ Consumables
- **Men**
  - ✓ Strength with respect to Workload norms

- ✓ Actual output with respect to strength operated
- ✓ Workload based on Work Study Reports
- ✓ Incentive Bonus
- ✓ Overtime
- ✓ Idle Time
- ✓ Training

#### PROCUREMENT

- Justification
- Design/Specification
- Installation & Commissioning

#### MAINTENANCE

- Preventive Maintenance VS Breakdown Maintenance
- Implication of changes in design

#### UTILISATION

- Load Charts
- Monitoring Reports
- Machine down time

#### REPLACEMENT AND RENEWALS

- Periodicity—Life cum condition
- Cost of replacement
- Upgradation

#### CONSUMABLES

- Fuel oils
- Lubricants
- General Purpose Items

#### PERSONNEL MANAGEMENT

- Staff Strength sanctioned with respect to targeted output
- Review of Sanctioned Strength with respect to automation, higher capacity of machines etc.
  - ✓ Review of output with respect to
  - ✓ Work Load norms
  - ✓ Work Study Reports
  - ✓ Mechanisation and Modernisation of Plant and Machinery
- Review of Incentive Bonus paid
- Review of Overtime and Idle Time

#### STORES

- Procurement
- Custody
- Inventory Management
- Payment Procedures

**PROCUREMENT**

- Incorrect estimation of requirement causing large purchases and leading to overstocking and ultimate obsolescence
- Change in technology leading to obsolescence
- Defective analysis of tendered offers
- Defective inspections

**CUSTODY**

- Receipt Accountal and Issues
- Adequacy of Storage Facilities
- Security Arrangements

**INVENTORY MANAGEMENT**

- Verification of Stock
- Preparation of Annual Indents
- Managing Issues with respect to Shelf Life of Items

**PAYMENT PROCEDURES**

- Adjustment of Advance Payments
- Recovery of advances paid in case of defective supplies
- Monitoring Bank Guarantee Validity

**COMMON AREAS**

- Rules of Procedure
- Co-ordination amongst Departments
- Provisions of Contract--- whether drawn to cover all contingencies

**FINANCIAL IMPLICATIONS**

- Blocking up of Capital
- Infructuous or Wasteful expenditure
- Extra expenditure

## **Documentary and systematic features of Workshop Accounting**

### **Work Order System and On-cost Charges**

- The analysis of workshop expenditure is carried out with the aid of a system of work order representing the unit of such analysis.

### **Revenue Standing Work Orders (WO)**

- Conform to Revenue Accounts classification and remain unchanged from year to year.

### **Other Standing Work Orders**

- Meant for booking the expenditure other than chargeable to Revenue.

### **On Cost Work Orders**

- For booking On Cost charges separately for Shop On Cost & General On Cost.

### **Manufacturing Work Orders**

- For Process Shop for ascertaining the cost of Semi-manufactured material viz, Foundry Castings, Scantlings etc.

### **Grouping Work Orders**

- For works estimated to cost Rs. 500 or less.

### **Inter Departmental Work Orders**

- For works estimated to cost over Rs.500.

### **Stores Stock Series**

- For the manufacture of component parts. These series are used every half-year.

### **Capital and DRF Work Orders**

- For booking expenditure on works of capital nature and those chargeable to DRF.
- A printed list is issued on each Railway for each workshop for reference and watching that the expenditure is booked to the proper work order.

### **On cost Charges**

- These are charges incurred in various shops within the workshop apart from direct expenditures on labour and material that one incurred on jobs.
- These charges cannot be charged direct to the cost of the component.
- Such charges are known as:
  - Proforma On Cost, General On Cost and Shop On Cost.

### **Proforma on Cost (POC)**

- Indirect charges introduced to include all On Cost components which are not included in the

cost of work done but which would be so included in the commercial undertaking. These charges are either charged off directly to final heads of Working Expenses or of charges not included in the Working Expenses of the Railway.

### **General on Cost (GOC)**

- Includes all On Cost than Proforma On Cost that is incurred in common with more than one shop or department within the workshop.

### **Shop On Cost**

- Includes all On Cost incurred within an accounting unit such as shop or departmental section which cannot be directly charged to the works

### **Notes:**

- Separate standing work orders are kept for booking expenditure chargeable to General On Cost and Shop On Cost separately for 'labour' & 'material'.
- Annual budget for General On Cost and Shop On Cost are prepared for fixing a percentage for levying on various jobs.
- Annual budget for Proforma On Cost is also made according to & percentage arrived at separately under supervision, PF contribution, Repair & Maintenance etc. Proforma on Cost when levied is credited to Earnings.

## **Job Costing in Railway Workshops**

- All Indian Railway workshops except Production Unit are designed and primarily intended for the repairs and maintenance of rolling stock and other properties required for Railway operation.
- In a large number of cases the repairs have to be carried out by using a multitude of spare parts and fittings manufactured in advance and kept in stock for the purpose, the cost of such spares and fittings has to be ascertained with a fair degree of accuracy.
- Thus a system of detailed job costing of such parts becomes more or less inevitable.

### **Object of Job Costing**

- To compare the costs of similar articles manufactured from time to time in the workshops and finding out reasons for variation in costs and
- To compare the cost of articles manufactured in the workshops with those

manufactured on other Railways or with the market-price of similar articles.

**Essential features of Job Costing System**

- Estimation in advance of the time that should be spent and the materials that should be used.
- Systematic comparison of the results of actual performance with such estimates.
- Comparison of the standards set by technical staff with the results actually obtained.

**Production Units principles and practices including cost audit**

- Cost accounting is process of accounting for cost at which expenditure is incurred to the establishment of its ultimate relationship with cost centres and cost units.
- Cost of individual products or services and the profit or loss from each are to be pre-planned and are required concurrently, as in the process of manufacture or of rendering the

service proceeds, recourse has to be had to cost accounting methods.

- Costing refers to the techniques or process of ascertaining cost, the methods used and the actual process of cost finding.

**Techniques of Costing**

- These involve two fundamental steps:
  - Collection & classification of expenditure according to the cost elements.
  - Allocation & apportionment of the expenditure to the cost centres or cost Units.

**Elements of Cost**

- A manufacturing organisation is concerned
- with conversion of raw materials into finished products with the aid of labour and certain other services.
- The elements of cost are:
  - Material -Direct and Indirect
  - Labour -Direct and Indirect
  - Expenses or cost of service rendered- Direct and Indirect
- A flow chart is given below:

Direct Material Direct Labour Direct Expenses	Prime cost
Indirect Material Indirect Labour Indirect Expenses	+ <u>Factory (Works or Manufacturing Over heads)</u> = Total Factory (Works or Manufacturing Cost) + Administrative Overheads. + <u>Selling &amp; Distribution Overheads</u> = Cost of Sales. + <u>Profit</u> = Sales

- Cost centres or cost units ascertain the costs.
- There are two main cost centres:
  - Production cost centres like Machine shops, Welding shops etc.
  - Service cost centres like Power House or Gas producing shop.

### Job Costing / Process Costing

- Three types of classification exist:

#### Fixed Cost

- These are costs which tend to be constant at all levels of production.

#### Variable Cost

- These tend to vary with the volume of output. Any increase in the volume of production results in an increase in the variable costs & vice-versa.

#### Semi-Variable or Semi-fixed Cost

- They are partly fixed and partly variable in relation to output.

#### Cost Audit Findings

- Reveals unprofitable activities, losses or inefficiencies in any form as:
  - Wastage of manpower, idle time & lost time.
  - Wastage of material in the form of spoilage, excessive scrap etc.
  - Wastage of resources e.g., inadequate utilisation of Plant & Machinery & Other facilities.

#### Rolling Stock Programme (RSP) and Budget

- This is already described in Session 7 in details under "Stages Prior to Performance", "Budget Grants" and "Funds in Railway Workshops".
- Provision and procurement forms an important function of material management in the Railways as it relates to calculating the requirement, sourcing and acquisition among others of critical items of inventory and entails sufficient outlays.
- In so far as Rolling Stock etc. is concerned, the purchase of Rolling Stock –locomotives, coaches & wagons is done centrally by the Ministry of Railways and allotted to the Railways (Chapter VII of Indian Railway Code for the Stores Department).

- 'Material Management' module has been delineated at the conclusion.

### Estimates and Completion Reports

- Towards existing provisioning system, the stores are classified into the following categories:
  - Category A High value items (about 5% of the total number of items) constitute 70% of the total value of all stores stocked.
  - Category B Medium value items (about 15% of the total number of items) constitute 20% of the total value of all stores stocked.
  - Category C Low value items (about 80% of the total number of items) constitute 10% of the total value of all stores stocked.
- Annual contract system is a fixed Internal Review System where the review period is one year. The period is called "Contract Period" (C.P.).
- Different Contract Periods are fixed for items of a different nature, so that purchases are conveniently divided for the whole year.
- The position of an item is reviewed at a fixed date as per time table prepared and the requirements are then sent to the purchase office sufficiently in advance.
- The provisioning is based on Anticipated Annual Consumption (AAC) figures.
- The Estimate sheets in respect of 'A' and 'B' category as above have to be vetted by Associate Finance.
- The Estimate sheets of 'C' Category items do not need any vetting by Accounts Finance.
- Controller of Stores office consolidates estimate sheets for all depots together for each item for procurement (Para 601-S).
- For Railway Board items, Ministry of Railways consolidates the demand of all zonal Railways and processes them for import of stores or placement of orders on the monopoly suppliers depending on the nature of purchases.
- DGS&D and other Govt. agencies for purchase generally follow the guidelines laid down by the Govt. for price preferences to be accorded to small-scale industries etc.

## Estimation of Requirement and Compliance

- Each depot prepares estimate sheets on the basis of their requirements of material for the interim period (10 months period) and next contract period for all the stock items 10 months before the contract period and sends it to Controller of Stores for procurement process (Paras 603& 604 S).

## Workshop Attached Depots

- Forecast schedules of all stores, tools, assemblies and fittings and components, required by the workshop for periodical overhauls of rolling stock are prepared by Works Manager.
- These schedules are sent to Depot every month well in advance to enable the latter to keep such materials ready for early issue.
- Every shop prepares manuscript advance lists, in duplicate, of materials likely to be drawn by them during the next few days and furnishes to Ward Custodian to keep the material ready.
- All materials required by the workshop are drawn on "Issue Tickets" prepared by shops in duplicate (1508 to 1510 S)

## Requisition Compliance

- The primary function of a Stores Depot is to supply materials against requisitions.
- The efficiency indicator shows the degree of success or failure in the primary job.
- The target is 100% compliance.
- Depot officer should send to Controller of Stores (COS) once a fortnight a statement of pending requisitions to enable them to take prompt steps to remedy defects in recoument of stores (1338-S). However, in every monthly report, each depot officer communicates the position to COS.
- Purchase and Shop-manufactured Items and Demands not complied with should form part of audit comments.

**NOTE:-** 1) The out of stock (O/S) position of purchase items and workshop Manufactured Items is communicated through monthly Report of Controller of Stores of zonal Railway to the Railway Board.

2) Out of stock statement is prepared for items having stock position less than 5% of Anticipated Annual Consumption in case of 'A'

category items and 10% of Anticipated Annual Consumption in case of 'B' and 'C' category items.

3) In the ideal Inventory Management there should be no out of stock item.

## Workshop Manufacturing Suspense Labour Charges

- On receipt of time/tally sheets in respect of hourly reconciliation and evaluation of time taken on each job in Accounts Office, total labour charges against each WO are summarized in the Labour **sub-ledger**.
  - The total amount of salary and TA etc. of Chagemen and Mistries paid during the month are charged to SOG and posted from Register of Shop Labour Charges at the bottom of Labour Sub Ledger under the relevant oncost WO.
  - The amount of all salary, TA and labour bills chargeable to workshop manufacture "**Labour Suspense**" is noted in the **Register of Shop Labour Charges** in Accounts Office separately for each Shop and the total of such through Labour Sub-Ledgers.
  - The difference, if any, is treated as "difference between time/tally sheets and LPS on account of average rates". The **net difference** at the end of **March** in this WO should be adjusted as '**Under and Overcharges Oncost**'.
  - Postings in the Labour Sub-Ledger (LSL) are transcribed to the **Labour Schedule** to prepare summary of labour charges for the entire workshop. The labour charges incurred on each job in the LSL for each shop and calculated on the direct labour charges at the predetermined percentage are posted in the **Workshop General Register**.
- ### Allocation of Cost of Material
- Sources of receipt of materials in Workshop: Workshop Stores Depot, General Stores Depot, Contractors, Other Divisions/ Railways and Workshops
  - Checked as to the allocation, pairing etc.
  - Summarised in separate sub-ledger, totals of which are reconciled with the last Daily Summary are the debits received.
  - These stores are accounted for through Requisition, Issue Notes, Receipts Notes,

Transfer Certificates (TCs) received from other Divisions & Railways, Write-Back orders.

- Stores returned to Stores depots through Advice Notes and Manufactured Stores supplied to Stores depots are summarised in the Credit Stores Sub-ledger and reconciled with Daily Summaries of Credits and Monthly Abstracts.
- Separate Sub-ledgers are kept for out-turn of Process Shops.
- A summary of all Stores and Other Charges is prepared showing total amount under various sub-ledgers.
- The total of the various columns shown in the summary Sub-ledger is checked with reference to:
  - Last Daily Summaries received from Stores Accounts Office.
  - Debits raised by Divisions and Foreign railways.
  - Cash Book Debits i.e. payment made for Municipal Taxes, License Fees and Direct Purchase of Stores.
  - Issues from Workshop Manufacturing Account and Write-Back orders.
- Changes for stores booked on each Work Order in the Stores Sub-ledgers are posted in Workshop General Register(WGR).
- With the posting of WGR. a summary of all the sub-ledgers (Labour & Stores) called Check Sheet is prepared.
- To ensure correctness of posting of sub-ledgers and its transfer to Out-turn Statement (Parts I and II) against each Work Order operated during the month.
- Check-sheet is totalled down-wise and cross-wise and grand totals under Labour and Stores are checked with grand totals as per Summary of Labour Sub-ledger/Stores Sub-Ledger.
- Capital Works or Works executed for other Govt. departments, private parties etc. in addition to work on cost charges, POC are also levied. A Statement of such charges for the month is prepared and posted in WGR under the WO.
- After posting of WGR from sub-ledgers, Out-turn Statements indicating the expenditure incurred on completed Works/Work-in-Progress are prepared and the posting in Out-turn Statement is compared

with the posting in Check-Sheet by individual WO to find out errors in the posting of WGR from sub-ledgers as also in the Out-turn Statement from WGR.

- Out-turn statement Part II shows the expenditure on Work-in-Progress or on completed works awaiting adjustment under the heads e.g. manufacturing works, stores department works, works done for Defence department. Private bodies, railway employees etc., work executed on Grouping Work Orders.
- Out-turn Statement Part I and II are totalled down and cross-wise.
- A summary of accounts classification showing total expenditure (Sub-Head wise) is prepared in respect of Out-turn Statement Part I and head-wise in Out-turn Statement Part II, the total of Part II is carried over to Part I and grand total struck.
- The closing balance in the Out-turn Statement indicates the balance outstanding under Workshop Manufacturing Suspense Account.



### Preparation of Monthly Account Current of the transactions pertaining to Workshop Manufacturing Suspense

- Shows Opening balance, debit, credit and closing balance.
- Should be posted from the following record.

Opening Balance:	From Account current of the previous month.	
Debit:	Labour:	From labour Schedule.
	Cash:	Debit to WMS A/c on account of contractor's payment from Monthly Classified Abstract of cash transactions.
	Stores :	From Daily Debit Summary of I/Notes.
	Other charges:	From Stores Summary Sub-ledgers.
	Freight & Proforma-On-Cost:	From Schedule of POC.
Credit:		From Summary of Out-turn Statement Part I.
Closing Balance:		OB+Debit-Credit.

- After journalizing the various transactions of debits and credits to WMS A/c, the balances in the WGR are totaled up-to-date after positing the credit side thereof. The balance is then tallied with OT STT Part II.

### **Reconciliation of Balance under WMS Account as per General Book and Out-turn Statement**

- Ensure that there is no difference between the two sets of books and difference arising due to:
  - Vouchers journalised against WMS A/c but not taken into the Out-turn Statement for its non-receipt of Debits were not accounted for in the General Books. Adjustment of difference in accounts is carried out as detailed in the Mechanical Code.

### **Labour Book**

- **CREDIT** is posted from Labour Schedule and **DEBIT** from various abstracts of bills passed for the month.

### **Monthly Review of Balances under WMS Account is done to see that:**

- All items are current and have been undertaken after issue of proper WO under sanction of the competent authority.
- Details consist of only labour material and work on-cost charges in r/o WIP or completed jobs awaiting adjustment.
- There are no credit items in the details of balance and if there be any, these are to be noted for immediate adjustment.
- In respect of jobs undertaken for outsiders/other Govt. Deptts/PSUs etc., a sufficient deposit has been made and the estimate includes all charges and the same accepted by the party.
- There are no inefficient balance and the periodical adjustment in respect of Over/Under charges under manufacture and repair WOs are carried out regularly and outstanding on this account is not allowed to accumulate.
- Result of review is sent to FA&CAO half-yearly.

### **Allocation of Cost of Repairing Material**

- Materials are received from Stores Depots or Running Sheds in railway workshop for undertaking repair e.g. Ferrous/Non-ferrous Duplicates (stock/non-stock items), special items.

- For Stock items - Stores Depots collect the items and send them in batches for repair by debits at the book rate and after repair while returning these materials are debited with the value of the article plus the actual cost of repair or the average cost of repair as is convenient.
- For Non-stock items- After repair, items are sent back to sheds.

### **Materials Management**

- Material Management is the Planning, Scheduling, Procurement and Controlling of materials in the manner consistent with optimum quality, quantity, cost and utilisation of facilities

### **Checklist of Important Functions in the Field of Materials Management**

#### **Material requirement**

- Planning and Programming Stock items and Non-stock items,
- Recoupment/Estimate Sheets for stock Items, Anticipated Annual Consumption (AAC),
- Methods of forecasting AAC, Provisioning of the quantity.

#### **Effective Purchasing:**

- Importance,
- Basic Objectives,
- Canons of Financial Propriety,
- Centralised Agencies for the Procurement of Stores Viz.,
  - Railway Board, Director General of Supplies and Disposal (DGS&D), Controller of Stationery, Kolkata, direct purchase by Zonal Railways, Registration of Vendors, mode of tendering-Advertised Tender, Bulletin Tender, Special Limited Tender/Limited Tender and Single Tender.
- Evaluation of offers and contractual conditions and placement of orders, selection of vendor and monitoring of performance.

## Inventory Control

- Scope and meaning, various costs related to Inventory-Cost of ordering Inventory, Carrying Cost, Economic Order Quantity

$$(EOQ)=2AS$$

Where

A	Is annual requirement.
S	Is ordering cost.
C	Is cost of unit inventory.
I	Is inventory carrying cost.

- Systems of Recoupment: Maximum/Minimum System and Annual Review System-Advantage of Annual Review System.

Computer Aided Techniques: Inventory Management by Exception Reports, future scope of Computer Aided Inventory Control-Liability Register, Imprest Stores, Forecasting of Demands, Vendor Evaluation.

## Receipt, Inspection, Issue, Material Handling and Transport

- Receipt of Materials in Warehouses, Weighment, Inspection, etc.
- Pre-inspection by Rail India Technical and Economic Services, Department of Inspection, etc. Inspection by consignee on receipt, Consignee's Right of rejection, handing of rejected Stores.
- Storage-Precautions during storage, special go-downs, strong rooms for costly stores preservation, precautions against fire hazards, security.
- Issue and Despatches and Transportation-Store Vans.

## Value analysis

- Differentiation between value and cost, use value and esteem value, technique of value analysis-Analytical method-questionnaire for value analysis known as analytical method:
  - Can the part be eliminated?
  - Can cheaper materials be used?
  - Can it be bought more cheaply?
  - Can you save on finish?

- Can you use a Standard Part?
- Can you use anything else?
- Value analysis on Railways, Product Evaluation Cells.

## Standardization

- Standardisation of Materials, Simplification, Rationalisation and Variety Reduction. Weeding out obsolescent and duplicate items. Material codification system and its principles. Functional grouping codification existing on Railways, benefits of Standardization.

## Disposal of Scrap

- The definition of Scrap, Scrap as part of Inventory, various categories of Scrap, Sorting of Scrap. Survey Committee, Exemption from Survey Committee, Disposal of Scrap-Auction Sale, Tender Sale, Direct Sale and Sales to employees. Target for Scrap disposals-given by Railway Board and their achievements-Importance of Material Handling Facilities, Twin Yard System.

## Macro-overview

- Part played by Materials Management is ensuring profitability as compared to increase in sales and prices. Importance of Materials Management in developing countries, Materials Management as a team-work of Consumers, Finance, Production and Stores. Creation of new disciplines like Value Analysis. Product Evaluation and Standardization Cell for optimum use

## Audit points on Railway Workshop

## Audit of Systems of Cost Accounting

- While the system of Cost Accounting is almost an essential requisite of a modern workshop, it may sometimes be elaborated to such an extent as to result in considerably increased expenditure in accountancy.
- The total cost incurred in such accounting procedures may, therefore, be compared with the total cost of operations in the workshops to see that it does not become unduly disproportionate.

## Reconciliation of Cost Sheets with Accounts

- It is to be seen that a reconciliation of cost sheets with financial accounts is carried out efficiently vide Para 943-W.

### Statement Cost Analysis for the Batch Order Completed

- On completion of each batch order, print out on the above statement should be reviewed in audit in respect of month to the extent prescribed.
- This review is to be supplemented by a further review of Material analysis Statement and Shop-wise/Series-wise totals for WMS card.
- “The comparative statement of utilisation of man-hours for the month prepared manually” should also be scrutinised.

### Manufactured Articles

- At times it is noticed that for the manufacture of some articles such as a locomotive, certain components have to be procured/obtained in a finished or semi-finished stage from outside sources or from other workshops. The cost at which such articles should be taken into account and the indirect charges to be levied in such cases should be scrutinised carefully.
- If the cost of manufacture in the workshop is much higher than the cost in the open market, this should be brought to the notice of the Railway Administration.
- For advantages, these articles may only be manufactured in workshops in slack seasons.
- Debits booked under various On-Cost Work Orders should be scrutinised to see that they are not used as a dumping ground for charges which can be allocated directly to other work orders.
- Cost sheets which cover the whole field of production activity (Form W-934) should be scrutinised to see that:
  - Labour charges have been booked by the shops required to perform operations as mentioned in the Route Cards.
  - Material charges have been booked by the shops processing the operation. Adjustment for the off-cuts or scraps wherever utilised, has been made where required.
  - Labour and Material charges have not been booked by shops not mentioned in the Route Cards.
  - Quantity passed by the Inspector in the final operation has been acknowledged by the Stores Depot by suitable endorsement on Route Card and that necessary credits for the manufactured articles supplied to the

Store Department have been afforded by the Stores Accounts Office.

- There are no discrepancies between the number of articles actually completed and that for charges booked on sub Work Order and the weight is also not out of proportion.

### Scope and Standards of Field Audit

- The selection of projects/schemes in a Railway Workshop or Production Unit for review should be done with utmost care after making a preliminary study taking into account the various factors apart from the financial outlays involved.
- At preliminary study stage, areas of investigations are identified and methods of reviews determined. After selection, audit plan is chalked out for collection of necessary data.
- In respect of Central Reviews, i.e., reviews selected by Comptroller and Auditor General of India, the detailed guide lines in respect of each review are issued by Headquarters.
- The approach of review should be systematic, methodical, logical and routine.
- While reviewing, an in-depth study of all Administrative Reports, Manuals, Statistical Reviews (Published) etc. of Railway Administration is required to be made.
- The review is aimed at examination of systems, procedures, planning, implementation of operational performance of project/scheme etc and bringing out inter-alia weaknesses, deficiencies and bottlenecks of various stages of operations.
- The review should cover mainly the economic aspect. Still it is to be borne in mind that the Railways are an important instrument of economic and industrial development of backward areas. The review should thus cover social-economic aspect as well, wherever applicable.

### Guidelines for Audit

During audit it is to be ensured:

- Whether the sanctioning & spending authorities have observed economy.
- Whether money is spent as per work orders including On Cost work orders and the estimated cost of work is rational and reasonable.
- That the rate and scale of expenditure is justified under the circumstances.

- Whether detailed programme or cost schedule has been framed and are adhered to, if not, for what reason and with what result.
- Whether there have been serious avoidable delays.
- Whether there has been any wasteful expenditure including that resulting from lack of co-ordination among the departments.
- Whether there has been any serious lapse or system lacunae or recurring losses.
- Whether idle time and overtime are properly examined to eliminate wasteful methods, out of date practices etc.
- Whether bonus and piece work systems particularly in regard to the booking of time of workers and quantum and quality of out-turn are scrutinised appropriately.
- Cost Accounts, Labour Records, Register of Fixed Assets and Planning and Progress departments should be examined efficiently in the light of the model questionnaire in Appendix 4 of the Railway Audit Manual.
- Performance cost compares with the results obtained in respect of similar works undertaken in other workshops.
- That value for money is returned by cost benefit analysis.
- How far a particular activity is producing results expected of it.
- How far the physical targets have been achieved within the existing time frame.
- How far the final purposes or objects of expenditure have been achieved.
- How far the propriety of equitable distribution of overheads to several jobs has been observed.
- How far wastages in Foundry & Saw Mill Shops have been curbed. Whether comparative study of the position on all Railways has been made.
- Whether any items purchased cannot be manufactured in the Railway workshops at cheaper rates. Even if they are at the same rates they may be manufactured in Railway Workshops as it would reduce the overhead charges of the Railway shops as a whole and thus reduce the cost of other items manufactured.

Audit should also see whether:

- Objectives of the scheme have been clearly defined and are in conformity with the policies of the Government.
- A good monitoring /Management information System (MIS) exists for collection of reliable data.
- The performance is efficient and where performance indicator exists, the actual performance is to be compared with the indicators to evaluate efficiency.
- Cost schedules are being adhered to.
- There has been serious avoidable delays in the progress of works due to efficient and defective handling of works leading to cost overrun or any loss of revenue due to delayed execution.
- There has been wasteful expenditure including that resulting in lack of co-ordination amongst different departments of Mechanical and Stores department.
- Performance/Cost compares with the results obtained in respect of similar schemes in other fields in the public sector.
- There are guidelines for holding inventories & yardsticks in respect of inputs and outputs and system of review of utilisation of plant capacity and manpower.

**Note:**

1) In attempting reviews the emphasis is on quality rather than on mere lengthy narrative.

2) Lay more emphasis on collection and analysis of facts and figures rather than raising queries for the sake of raising queries.

3) The review report should be drafted after careful, detailed and analytical dissection of the findings of investigations made during review and as such mere copying of Departmental reports may be avoided.

4) The lay-out must have “highlights” of the important comments with money value, if any below the “Introduction”, “Scope of Audit” and “Organisational Set Up”.

5) If the report relates to a single project, a chronological sequence of events may be prepared and enclosed with the Review Note in addition to the list of keys.

6) The amount of loss/infructuous expenditure/idle investment/frauds etc. may be summarised in concluding sub-para.

### **Additional Audit points:-**

#### **Workshop Estimates:**

- It is to be checked along with contracts, contractor's bills and completion reports.
- It should be seen that all the contracts are in conformity with the estimates and how the estimates have been framed keeping in view the various specifications, drawings etc.
- During audit of estimates, review of annual works programme followings are to be seen:
  - The propriety of justification for the expenditure it is proposed to incur.
  - The incidence and classification or allocation of the charges.
  - The existence of the sanction of the competent authority.
- If any authorised rolling stock is condemned or otherwise reduced without being replaced, its original cost is written back from Capital to DRF in the same year.
- It should be seen that estimates of probable credits to revenue for materials to be released from the breaking up of the replaced stock and in respect of rolling stock removed from the authorised list without replacement are properly prepared and sanctioned by the competent authority before the condemned rolling stock is actually broken.

#### **Completion Report**

- Sanction of the Railway Board is taken in case of alteration in the type or numbers of rolling stock consisting of material modification even though there may not be any excess over the sanctioned estimates vide paragraph 1011 E.
- Capital cost is correctly assessed for the purpose of calculating the half-yearly or yearly interest recoverable from other Govt. Departments concerned in case of saloons for other Govt. Departments and Postal Vehicles for Department of Posts.

#### **Absentee Statement, Gate Attendance, Time Sheets, Muster**

#### **Roll & Labour Pay Sheet. Overtime Sheets**

- It will be useful to visit the shops concerned and see that the method of booking labour against various works is correct and the initial records are correctly maintained.
- It should be seen that there is a proper system of recording labourers entering the shops.
- That a list of the absentees in various shops is prepared daily from such record.
- That a list of the absentees is prepared by the shop superintendent or other responsible official from the actual inspection of the labour employed.
- That the two lists of absentees are tallied with each other.
- The accuracy of the time sheet, may be verified by actual count during the visits to the shops.

#### **Labour Charges I / Time Sheets / Job Cards / Muster Rolls(MR)**

- The total Time Sheets/Job Cards are agreed with the Muster Rolls by the Time office & that
- The rates of pay shown in MR should be compared with those shown in Time Sheets
- The rates of pay shown in the MRs should be checked with the scale of wages laid down by the competent authority.

#### **Labour Charges II / Coolly Labour**

- That the proper record of attendance is maintained for coolly labour for whom no time sheets are usually prepared.

#### **Overtime bills**

- The allowances are covered by rules
- The system of overtime in vogue is consistent with efficiency and economy.

#### **Running of Workmen's Local Train**

- It is to be seen that the trains run punctually to time.

#### **Piece-work time sheets**

- The details of actual time spent wages and profit earned and the rate fixed for the job are furnished in Piece-Workers Statement to enable a check to be exercised over the correctness of profits distributed.
- When the Piece-work system results in a loss and when the loss is not recovered owing to its falling in a subsequent wage period, the desirability of avoiding the same by revising the

system of profits suitably may have to be suggested to the administration.

### Computerised Incentive Bills

- Bills are prepared shop-wise showing ticket no. shop and section code, time taken, time saved or lost, amount saved or lost and the amount payable.
- The details are to be seen from 'Ticketwise tabulation for the month' & 'Details of Job Card Statement'.

### Computerised Incentive Statement

- To see that 80% of the average percentage is applicable to the shop superintendent /Assistant Shop Superintendent of the Incentive Section
- The entries relating to the time taken and the time saved are susceptible of verification with reference to the details in Ticket-wise Tabulation for the corresponding shop and section.
- That the standard hours are reckoned with reference to the total no. of workers in the section.
- It is necessary to obtain an Intermediate Print out showing the no. of workers in the Incentive section.

### Computerised Error Statement

- Reconciliation statement printed in respect of Direct Workers should be checked to see that errors have been correctly rectified in respect of losses.
- Periodical review should be done on the statement of cards printed in the processing of essential indirect workers incentive bills which shows cases of essential indirect workers not prima facie employed in the incentive section.
- It should be seen that 'Gate Attendance Hours Reconciliation-Details for unreconciled ticket numbers' are reviewed and the correctness checked.

### Labour Sub-Ledger

- Summary of the total amount against each work order shown in various time sheets of each shop has been correctly exhibited.
- Time spent has been correctly evaluated at the ruling average rate.
- Overheads have been correctly evaluated.
- As the time/tally sheets do not give proceeding time, the labour sub-ledger is to be checked with respect to job cards also in the case of incentive sections.

### Stores Sub-Ledger

- Correctness of the stores debits/credits and their allocation to the work orders.
- Under the computerised system, 'Stores tabulation' showing voucher wise amount of stores issued, stores over-held for each work order is to be checked.
- The vouchers selected for audit should be traced into machine prepared Stores Tabulation sheet.
- The Voucher relating to the payment for municipal taxes, water charges, cost of electric current, carriage of material etc. should be traced into Cash Book and stores Journal and also to Miscellaneous Stores sub-ledger maintained for each shop.

### Requisition of Issue Tickets, Issue Notes, Daily Summaries, Monthly Summaries

- All requisitions are signed by a responsible officer and that requisitions complied with are duly acknowledged by the receiving officer.
- Issue notes are compared with requisitions.
- Issue notes are not issued for unusual items of charges and are not wrongly allocated.
- Pricing of materials is correct.
- Materials drawn are correctly debitible to the Work Order concerned.

### Daily Summary of Issues

- Copy of the Issue Note received direct from the shop is paired with the priced copy received in support of the Daily Summary of Issues from Stores Accounts office.
- That the allocation to Work Orders is correct.

### Monthly Summary of Issues

- It should be seen that the monthly summaries of issue of stores received from Stores Accounts Office agree with the total of the daily summaries of issues before they are returned duly accepted.

### Advice notes of Returned Stores (NS11)

- Stores returned by workshop are promptly acknowledged by the Stores Department.
- Quantity acknowledged must tally with the quantity returned.
- Rate at which credit is affordable must be reasonable.
- Allocation should be correct.

- Cases in which valuation of returned stores differs greatly from that given by Stores Department should be investigated and the reasons for difference examined to see how it was reconciled.

### Work Order

- All work orders are sanctioned by competent authority.
- All work orders are recorded in a register showing the work undertaken, the date of issue of work order, the date of commencement and date of completion of the work.
- An estimate is prepared in respect of works undertaken for private parties, other Government departments etc. and accepted by the party concerned, before the work is put in hand.
- In regard to Stock Work Orders, the various instruction issued by the Railways should be followed.
- In regard to Standing Work Orders chargeable to revenues, the charges debited should be examined in detail to see whether they form a legitimate charge against the Work Order.
- For private jobs the estimated cost of the works is deposited with a promise to pay on demand any excess expenditure.
- It is to be seen that there is compliance as above without undue delay.

### Workshop Accounts Current

- The opening balance should be checked with the closing balance of the previous month.
- The postings under debit & credit heads should be checked with supporting schedule.
- Arithmetical accuracy should be checked.
- Advices received from accounts office are incorporated in the accounts.
- Closing balances should be analysed to see that the items are current and there is no old outstanding.
- Labour schedule should also be subjected to check with reference to Labour sub-ledger and Tabulation statement for indirect workers.

### Transfer Statement

- Full particular including the reasons and authority for adjustments and the heads of account affected are given.
- Such adjustments are warranted from the point of view of Railway purposes.

### Manufacturing Accounts

- There is correct and reliable record of the quantity of materials received.
- The waste products are utilized or properly disposed of.
- There is proper record of the quantity of out-turn serviceable and unserviceable and of wastages.
- There is a responsible officer to scrutinise the wastages periodically, the ratio of serviceable to total out-turn and of waste to entire material used.
- There exists a proper system of transmitting all manufactured articles to Stores Department.
- Even if the articles are issued to Works directly the transaction should pass through Stores Account.

### Laboratory Accounts

- The rates charged for conducting tests re sufficient to cover the expenditure incurred in running the laboratory.
- These rates should be periodically revised.
- If work for private parties is undertaken in the laboratory, recoveries are to be made properly and credited to laboratory account.

### Foundry Accounts

- There is a separate work order for each metal.
- The monthly out-turn statement is prepared.
- Separate accounts are maintained for mouldings and for castings operation.
- The shops maintain a register for recording daily issue of metal to the furnace and the foundry accounts are reconciled with the register.
- That, besides the cost of metal charges like fuel and power, labour engaged in attending furnace and cupola and pouring molten metal into moulds together with usual overheads plus the cost of repairing cupola, blast connections and other Tools and Plant are debited to foundry accounts and these are distributed over the various work orders proportionately.
- The balance of scrap metal representing the difference between total receipts and issues of the month is accounted for distinctly as in the case of raw material in order to show the actual operating cost.
- The foundry scrap used is treated as receipt during the month.



- The quantity of finished material not issued to work or quantity of partly finished material in hand are shown in the out-turn, in the metal register so as to bring out clearly the rate of casting and enable an effective control over manufacture and wastage.
- That the unused metal and rejected casting are weighed and priced at the rates for metal and scrap respectively and in the closing balance as raw material in hand.

### **Out-turn Statement**

- The adjustment of outlay is affected monthly or on completion.
- There are no minus balances.
- There is no outlay on jobs prior to issue of Work orders.
- There are no completed jobs outstanding for more than 3 months.
- The expenditure on completed works chargeable to Capital, DRF, DF or Revenue is posted into Capital Works and Revenue Allocation Register.
- The closing balance in Workshop Suspense is agreed with General Books every month.
- The analysis of the balance under the Suspense Head according to the details in the Labour Book should be checked and reconciled with the General Books.

### **Workshop General Register (WGR)**

- That WGR prepared after collecting all charges on account of labour and stores or Work Order.
- That it is prepared from the allocated abstracts and summaries of labour and stores.
- That the postings into the final books upto the preparation of out-turn statement and the Account current of the amount spent during the month are to be checked.
- That the outstanding in Out-turn statement should be scrutinised to see that there has been no delay in making out bills, or getting acceptance of the parties concerned.
- That the outstandings are such as should form a charge against Workshop Suspense.
- The operations are all current and covered by competent sanction.
- That credit items in the details of balances are noted for immediate adjustments.

- That the details of balances under each work order consist only of labour and material expended on Unfinished Works.

**Example-I****Modernisation Programmes- Audit Points****Objective**

- The scheme of modernization was basically aimed at achieving reduction in periodical overhaul (POH) cycle time of rolling stock and affecting economy in the cost of rolling stock maintenance including POH.
- Audit noticed that the Railways made investments aggregating to RS. 390.59 crores on modernization of 10 workshops in Phase I (Kharagpur, Kanchrapara, Lower Parel and Matunga) and Phase II (Jagdhari, Golden Rock, Kharagpur, Ajmer, Perambur and Liluah) during 1989-90 to 1992-93.
- These enormous investments did not yield the benefits envisaged in the scheme of modernization.
- As per example, despite the investment of the RS. 55.34 crores, the modernization of Kharagpur Workshop did not result in any significant reduction in the cost of POH. The output of the said workshop also declined after modernization, Coaches from 3001 to 2531, Wagons from 11704 to 9844 and Diesel Locomotives from 80 to 60 between 1984-85 and 1992-93. Also 13 to 18 percent of wagons were rejected within three months of POH.
- In Carriage and Wagon Workshop, Perambur no improvement in POH time of Wagons/Coaches was noticed after completion of modernization (estimated cost RS. 4.25 crores). The time taken for POH of carriages after modernization actually increased.

**Example-II****Production Management-Repair Time Cycle**

The Railway Board prescribed repair time cycle for different types of Rolling Stock. Audit noticed that the actual time taken for POH of rolling stock was far in excess of targets fixed :

- Against the norm of Four days five workshops (Kota, Samastipur, Izatnagar, Dibrugarh and New Bongaigaon) took 9 to 17 days for POH of wagons
- Two Workshops (Kharagpur & New Bongaigaon) took 45-46 days for POH of Coaches against the norm of 18 days
- Kharagpur workshop took 184 days for POH of diesel locomotives against the norm of 25 days, the time taken in Perambur and Parel workshops (Western Railway) was 33 and 42 days respectively.
- Parel workshop (Western Railway) took 104 days for POH of Electric Locomotives against the norm of 25 days, the time taken in Kanchrapara workshop was 115 days
- Audit also noticed that excess time taken for POH of rolling stock resulted in loss of earning capacity of 38.07 crores on Western, Central and Northeast Frontier Railways.

**Example-III****Equipment Managements:  
Delayed Commissioning of Plant & Machinery**

It came to notice of audit that

- On Eastern Railway 33 Plants and Machineries (cost Rs 8.10 crores) remained idle for 12 to 36 months during 1986-87 to 1992-93
- In Golden Rock workshop 18 machines/equipments (cost Rs 2.75 crores) were idle for varying periods from 6 to 39 months during 1989-90 to 1992-93.
- In Jhansi workshop 7 machines (cost Rs. 174.68 lakhs) were commissioned after delays of 1 year to 8 years because of delay in finalizing site for foundation, delay in completion of Civil Engineering works defects noticed in machines and non-receipt of vital components
- In Parel and Matunga workshops 7 machines costing Rs. 2.09 crores were commissioned after delays of 7 to 12 months due to short supply of certain items and delay in installation of machines by the firms and so on.

**Example-IV****Breakdown of Plant & Machinery**

It was noticed in audit that:

- In Ajmer, Kota, Dahol and Parel Workshops of Western Railway 24 machines/equipments (cost 1.82 crores) remained idle due to breakdown for varying periods upto 5 years
- In Parel and Matunga workshops of Central Railway machines costing Rs. 4.05 crores remained idle owing to breakdown for varying periods from 42 days to 5 years

**Example-V****Under utilisation of Machines**

Audit noticed that

- In Dibrugarh and New Bongaigaon workshops of N. F. Railways 42 machines costing Rs. 133.74 lakhs were declared surplus of which 18 machines were found unserviceable on account of changes in operating practices and remained underutilized as of March, 1993
- In Ajmer workshop five plant and machinery valued at Rs. 288 crores remained underutilized to the extent of 55 to 99 percent during 1989-90 to 1992-93, the reasons for under utilization were less workload, machine breakdown, power failure etc.

### **Example-VI**

#### **Manpower Utilisation**

##### **Payment of Incentive Bonus to Workers**

An incentive scheme i.e. a scheme of payment by results where by a workman can additionally earn upto 50 percent of the standard basic wages by increasing his output was introduced in Railway workshops in 1961. It was noticed in audit that :

- An amount of Rs. 13.69 crores was paid to workers in five workshops on Western Railway as Incentive Bonus during 1989-90 to 1992-93, though the out-turn of the workshops had declined
- In a number of workshops the time saved exceeded 100 per cent of time actually taken. This was indicative of unrealistic fixation of the time allowed.

### **Example-VII**

#### **Irregular Payment of Overtime**

The Railway Board issued instructions in February and August 1982 that no overtime should be booked for the staff working under incentive scheme. Audit noticed that

- Despite Railway Board's instructions Railways paid (Northern, Western, Central and S.E.Railway) Rs. 5.05 crores as overtime allowance during 1989-90 to 1993-94 to staff governed by the Incentive scheme.

## Illustrations

### Illustration-I

(Based on Para 4.1.2 of Audit Report 2005)

#### **CLW: Procurement of loco component of incorrect specifications.**

- Centre Pivot Rubber Bush Assembly (CPRB), a component used in the WAG-7 locomotives was being purchased indigenously. However, as indigenous material was not found reliable in meeting the service condition of these locomotives, the Railway Board directed (June 2001) CLW to arrange for replacement of all the indigenous CPRBs by imported ones.
- CLW assessed (February 2002) requirement of the Zonal Railways as 1,410 CPRBs on the basis of indents received and 140 CPRBs for its own use. As there were only two approved foreign suppliers, GM/ CLW approved inviting Special Limited Tender from these two sources only. However, as one of the sources expressed inability to participate, only one source viz., M/s.Trelleborg Automotive Limited, U.K. was left for bulk procurement of the material. After deliberations and negotiations with the Indian agent (M/s.Ashika Commercial Private Limited), an order for 1,500 CPRBs at the cost of Rs.5.20 crore was placed in April 2002. The order was further enhanced (November 2002) to 1,740 CPRBs at the total cost of Rs.6.78 crore.
- The entire quantity was received by CLW in five lots during the period February 2003 to July 2003. On receipt of material, CLW observed that the material received was not as per specification and the entire quantity was rejected (August 2003) and the firm was asked (September 2003) to rectify/ replace the rejected material or to refund entire cost of the material received.
- In this connection, the following points arise:
  - The TC's evaluation and recommendations were faulty and ambiguous, which led to placement of orders on a firm, without providing adequate safeguards and supply of CPRBs of a wrong specification. The imported bushes were four times more expensive than the indigenous ones. The TC justified the higher cost on the basis of longer life cycle but could not insist on guarantee from the supplier for the life cycle period. Since this was not ensured, procurement at a higher cost was not in order. Regarding specifications, throughout their deliberations the TC held that the firm's own drawing was technically not acceptable and that CLW's drawing only should be supplied, yet, while drawing up terms and conditions, they mentioned both the drawings against 'Description of Stores', which led to the firm and the inspecting agent at Paris interpreting it to mean that the firm's drawing was acceptable.
  - In view of rejection of the entire material, CLW resorted to procurement and utilisation of indigenous version of the CPRBs, which are known to be high on maintenance costs due to need for frequent replacements.
  - In the meanwhile, the firm is yet (September 2004) to replace the material and an amount of Rs.6.78 crore paid to the firm lies blocked.
- When the matter was taken up (February 2004), CLW held that the firm's drawing was identical to CLW's and there was nothing wrong in mentioning both the drawing numbers in the description of the item in purchase order. While accepting that rejected material has not yet been replaced by the firm, they stated that the firm has agreed to supply the entire quantity vide their letter dated 15 November 2003. Final modalities are being worked out. Once the deficiencies are made good by the firm, entire supplies can be used.
- These arguments are not tenable because, the very fact that the entire quantity was rejected on grounds that it did not conform to the CLW drawing shows that the two drawings were not identical and that mention of both the drawings in the purchase order description had caused the confusion. Further, a perusal of letter dated 15 November 2003 reveals that the firm has agreed to supply only extra steel bush to make the supply conform to the CLW drawing. This also is yet to be done and, in the meantime, indigenous version of bushes having low life cycle continue to be used.
- The matter was taken up with the Railway Board in October 2004 and their reply has not been received (December 2004).

**Question:**

1. What is Centre Pivot Rubber Bush Assembly (CPRB), why was the item desired to be procured from a foreign firm while the same was used to be procured indigenously? What was difference in cost between indigenous and foreign item?

2. What was the total no. of the above items ordered for supply and how much money was involved in the deal? When was the material received and in how many lots?

3. Why was the item rejected?

4. Railway Administration contended that their drawings and the drawings of the firm were identical, so there was no ambiguity in the terms of the contract. How can you defend Audit contention that the drawings were different and due to ambiguity in drawing the entire lot of the above item had to be rejected?

***Illustration-II***

(Based on Para 4.2.8 of Audit Report 2005)

**CLW: Injudicious procurement of High Voltage Cables.**

- The Railway Board (November 1995) set a production target of 41 three-phase locomotives by CLW for the years 1998-99 and 1999-2000.
- To meet production requirement of three-phase locomotives, CLW procured 10 sets of transformers without HVC against Purchase Order (PO) placed in October 1996. Besides, 47 sets of main transformers along with HVC were procured between May 1998 and September 1999. Separately, 14 sets of HVC were procured in PO placed in April 1998 and another 30 sets in August 1999.
- As it was evident that more than required HVC were procured (44 HVC sets against ten transformers purchased without HVC), Audit reviewed utilisation of 30 sets of HVC procured subsequently. Findings revealed that only six sets were issued to the shop during 10 March 2003 to 9 January 2004, of which only five sets have so far been utilised (August 2004). Thus, 25 sets valuing Rs.1.15 crore are lying idle for more than four years since their receipt.
- In this connection, the following comments arise:
  - Since 47 sets of main transformer were procured along with HVC to meet the production targets set for manufacture of three-phase locos for 1998-99 and 1999-2000, procurement of 30 sets of HVC separately during this period was unjustified. Injudicious procurement of these cable sets resulted in blocking up of capital of Rs.1.37 crore. Warranty period of the material was 24 months from the date of supply of material or 18 months from date of commissioning, whichever is earlier. The cable sets were received during January 2000 to September 2000 and the warranty for all the cables had expired by September 2002. The 30 sets were lying idle in the stores and could not be utilised during the warranty period.
  - Performance of the five sets of cables utilised so far is doubtful as even before their utilisation, four cases of failure were reported. Investigation by the representative of BSES Ltd. (the supplier) revealed that failure was on account of deterioration of insulation of cables and bushing as they were lying idle for a long time. The representative also observed that storage of material was not according to the normal practice and had resulted in ingress of moisture, water and dust particles. CLW was advised to test all cables to determine their suitability for use. However, as testing facilities were not available, cables were utilised without being tested before use.
  - The balance 25 cable sets valuing Rs.1.15 crore continue to lie idle (August 2004) and the likelihood of their utilisation is doubtful and even if used they are likely to jeopardise the safety of the locomotives.

- When the matter was taken up (February 2004), CLW stated (April 2004) that these cables have a long shelf life and will be used in future production from 2004-05 onwards as transformers were now being procured without cables. They also stated that adequate care has been taken to prevent deterioration and there is no chance of safety hazard in the locomotive if proper maintenance practice is followed by sheds and POH shops.
- These arguments are not tenable because the fact remains that 30 sets of HVC were lying idle all through their warranty period. Performance of the five sets utilised so far is doubtful and utilisation of balance sets will depend upon actual testing of the cables before use, which will reveal the exact state of damage/ deterioration. Records reveal that only nine transformers were procured in the year 2000 without HVC and 21 transformers procured in 2003/ 2004 were with HVC. Even after utilising available HVC for the nine transformers procured in 2000, 25 sets are lying idle. Chances of using these 25 sets in the near future also does not arise as 13 such transformers with HVC are yet to be used.
- The matter was brought to the notice of the Railway Board in August 2004 and their reply has not been received (December 2004).

**Question:**

1. Why the matter of purchase of High Voltage Cable was initially taken up by Audit? How much money is involved in it?
2. Why the performance of HVC had appeared to be doubtful in the eyes of Audit?
3. Point out the deficiencies in the planning of Railway Administration which led to blocking up of capital and made future utilization of the material doubtful?



## Solution to the Illustration-I

1. Centre Pivot Rubber Bush Assembly (CPRB), a component used in the WAG-7 locomotives.

This item was being purchased indigenously. However, as indigenous material was not found reliable in meeting the service condition of these locomotives, the Railway Board directed (June 2001) CLW to arrange for replacement of all the indigenous CPRBs by imported ones. As a result the Railway Administration opted for foreign firms.

The imported bushes were four times more expensive than the indigenous ones.

2. The order was further enhanced (November 2002) to 1,740 CPRBs at the total cost of Rs.6.78 crore.

The entire quantity was received by CLW in five lots during the period February 2003 to July 2003.

3. On receipt of material, CLW observed that the material received was not as per specification and the entire quantity was rejected (August 2003) and the firm was asked (September 2003) to rectify/ replace the rejected material or to refund entire cost of the material received.

4. Regarding specifications, throughout their deliberations the TC held that the firm's own drawing was technically not acceptable and that CLW's drawing only should be supplied, yet, while drawing up terms and conditions, they mentioned both the drawings against 'Description of Stores', which lead to the firm and the inspecting agent at Paris interpreting it to mean that the firm's drawing was acceptable.

When the matter was taken up (February 2004), CLW held that the firm's drawing was identical to CLW's and there was nothing wrong in mentioning both the drawing numbers in the description of the item in purchase order.

These arguments were not tenable because, the very fact that the entire quantity was rejected on grounds that it did not conform to the CLW drawing shows that the two drawings were not identical and that mention of both the drawings in the purchase order description had caused the confusion. Further, a perusal of letter dated 15 November 2003 reveals that the firm has agreed to supply only extra steel bush to make the supply conform to the CLW drawing. This also is yet to be done and, in the meantime, indigenous version of bushes having low life cycle continue to be used.

From above it is amply clear that there is a difference in drawings in the imported and indigenous bushes other wise the extra steel bush would not have been required for matching the required specification.

Thus the contention of Audit is correct.

## Solution to the Illustration-II

1. To meet production requirement of three-phase locomotives, CLW procured 10 sets of transformers without HVC against Purchase Order (PO) placed in October 1996. Besides, 47 sets of main transformers along with HVC were procured between May 1998 and September 1999. Separately, 14 sets of HVC were procured in PO placed in April 1998 and another 30 sets in August 1999. As it was evident that more than required HVC were procured (44 HVC sets against ten transformers purchased without HVC), Audit reviewed utilisation of 30 sets of HVC procured subsequently.

Procurement of 30 sets of HVC separately during this period was unjustified and procurement of these cable sets resulted in blocking up of capital of Rs.1.37 crore.

2. Performance of the five sets of cables utilised so far was doubtful as even before their utilisation, four cases of failure were reported. Investigation by the representative of BSES Ltd. (the supplier) revealed that failure was on account of deterioration of insulation of cables and bushing as they were lying idle for a long time. The representative also observed that storage of material was not according to the normal practice and had resulted in ingress of moisture, water and dust particles. CLW was advised to test all cables to determine their suitability for use. However, as testing facilities were not available, cables were utilised without being tested before use.

Thus the performance of the HVC appeared to be doubtful in Audit.

3. Since 47 sets of main transformer were procured along with HVC and 10 sets of transformers without HVC to meet the production targets set for manufacture of three-phase locos for 1998-99 and 1999-2000, procurement of 30 sets of HVC separately during this period was unjustified. Moreover, warranty period of the material was 24 months from the date of supply of material or 18 months from date of commissioning, whichever is earlier. The cable sets were received during January 2000 to September 2000 and the warranty for all the cables had expired by September 2002. The 30 sets were lying idle in the stores and could not be utilised during the warranty period.

□ Performance of the five sets of cables utilised so far is doubtful as even before their utilisation, four cases of failure were reported. Investigation by the representative of BSES Ltd. (the supplier) revealed that failure was on account of deterioration of insulation of cables and bushing as they were lying idle for a long time. The representative also observed that storage of material was not according to the normal practice and had resulted in ingress of moisture, water and dust particles. CLW was advised to test all cables to determine their suitability for use. However, as testing facilities were not available, cables were utilised without being tested before use.

The balance 25 cable sets continue to lie idle (August 2004) and the likelihood of their utilisation is doubtful and even if used they are likely to jeopardise the safety of the locomotives.


The CLW Administration stated (April 2004) that these cables have a long shelf life and will be used in future production from 2004-05 onwards as transformers were now being procured without cables. They also stated that adequate care has been taken to prevent deterioration and there is no chance of safety hazard in the locomotive if proper maintenance practice is followed by sheds and POH shops.

These arguments did not appear to be tenable because the fact remains that 30 sets of HVC were lying idle all through their warranty period. Performance of the five sets utilised so far is doubtful and utilisation of balance sets will depend upon actual testing of the cables before use, which will reveal the exact state of damage/ deterioration. Records reveal that only nine transformers were procured in the year 2000 without HVC and 21 transformers procured in 2003/ 2004 were with HVC. Even after utilising available HVC for the nine transformers procured in 2000, 25 sets are lying idle. Chances of using these 25 sets in the near future also did not arise as 21 transformers procured in 2003/ 2004 were with HVC.

Slide 1

**Session 8**

**Audit of Railway Workshop**



Training Module on Audit of Railways: Session:8

Slide 5

**Basic Concepts**

- There are various 'running sheds', 'sick lines' and 'train examining stations' conveniently situated on the line where different kinds of rolling stock are examined and kept in readiness for immediate use.

Training Module on Audit of Railways: Session:8

Slide 2

**Learning Objective**

- In this session, the participants will be able to understand the basic concepts of the audit of Railway Workshops. This will help them to focus on audit issues in the actual work context.

Training Module on Audit of Railways: Session:8

Slide 6

**Organisation of Railway Workshops**

- Workshops are under the control of the Mechanical Department of the Railways headed by the Chief Mechanical Engineer.
- Direct control of the officers of the Workshops is exercised by the Chief Workshop Engineer (CWE) who is the administrative Head of the Department.

Training Module on Audit of Railways: Session:8

Slide 3

**Basic Concepts**

- Safety and reliability of Railway Transport System depend on the proper maintenance of rolling stock.
- For this purpose, the Indian Railways have 46 Workshops equipped with Plant and Machinery manpower and infrastructure.

Training Module on Audit of Railways: Session:8

Slide 7

**Organisation of Railway Workshops**

- CME is assisted by one or more CMEs of HOD rank, Dy.CMEs and Works Managers.
- CWEs are assisted by Works Managers, Production Engineers, Personnel Officers, Workshop Accounts Officers, Workshops Stores Officers, Electric Engineers and Chemists and Metallurgists.

Training Module on Audit of Railways: Session:8

Slide 4

**Basic Concepts**

- Certain selected Workshops have also been entrusted the work of manufacturing of Various Types of Wagons
- These Workshops are involved in the manufacture of Boilers, Locomotives and Coaching Vehicles, Wheels, Tyres and Axles.

Training Module on Audit of Railways: Session:8

Slide 8

**Classification of Railway Workshops**

- Repair Workshops are divided into
  - Production Shops and
  - Service Shops.
- Broad divisions of Production Units are as under:
  - Production Shops
  - Service Department inside the Workshops
  - Service Department outside the Workshops
  - Stores Department and
  - General Departments

Training Module on Audit of Railways: Session:8

Slide 9

**Budget Grants, Appropriation and Re-appropriation**

- Expenditure should be covered by a Budget Provision or Appropriation.
- The final re-appropriation statement should be submitted to the General Manager for sanction.
- A final re-appropriation statement for funds required under Revenue Demands should be submitted to the General Manager for his sanction in March.

Training Module on Audit of Railways: Session:8 9

Slide 12

**Workshop Account Current**

- Prepared Monthly in Form W.1215.
- Since the manufacture in the Production Units vary from unit to unit, no standard form for use by them in respect of Account Current is prescribed.
- Production Units are left free to devise their own form for the purpose to suit their local conditions.

Training Module on Audit of Railways: Session:8 12

Slide 10

**Funds in Railway Workshops**

- The Revised and Budget estimates for construction, acquisition and replacement of assets are known as Budget (Works)
- Requirement of funds both for new constructions and for works in progress are submitted in the form of "Demands for Grants" presented to the Parliament
- Budget for Working Expenses are submitted to General Manager through the Chief Mechanical Engineer

Training Module on Audit of Railways: Session:8 10

Slide 13

**Workshop General Register (WGR)**

- A Subsidiary Register containing
  - details of accounts of all Work Orders operated under Workshops Manufacturing Suspense Account (WMS).
- Shop On Cost and General On Cost (Labour and Stores) are posted as debits.
- Proforma On Cost whenever leviable are also calculated and posted in the WGR.

Training Module on Audit of Railways: Session:8 13

Slide 11

**Funds in Railway Workshops**

- Concerned Demands are:
  - Demand No.5---Repair and Maintenance of Motive Power
  - Demand No.6---Repair and Maintenance of Carriage and Wagon
  - Demand No.3---General Repair Maintenance and Services
  - Demand No.7--- Repair and Maintenance
    - Plant and Equipment
  - Demand No.11---Staff Welfare and Amenities

Training Module on Audit of Railways: Session:8 11

Slide 14

**Workshop General Register (WGR) Contd.**

- Total debits in respect of each Work Order under Labour Stores and On Cost charges are struck in the WGR and transcribed to the Outturn Statements.
- Credits in WGR are posted from Issue Notes, Bill or Debit Schedule.
- Up to date totals in the WGR are struck and the outstanding balances worked out.

Training Module on Audit of Railways: Session:8 14

Slide 15

Incentive schemes in Railway Workshops

- Railway Board in 1949 took a decision to introduce some form of incentive scheme in Railway Workshop.
- Time is the basis of this scheme and time standards used were predetermined after systematic work measurement.
- Amount of incentive bonus earned is calculated with reference to the "Standard Hourly Rates".
- The Incentive Workers are classified as Direct, Essential Direct and Indirect Workers.

Training Module on Audit of Railways; Session:8 15

Slide 18

Work Order System and On-cost Charges

- The analysis of workshop expenditure is carried out with the aid of a system of work order.
- Revenue Standing Work Orders-
  - confirm to Revenue Accounts classification.
- Other Standing Work Orders-
  - meant for booking the expenditure other than chargeable to Revenue.

Training Module on Audit of Railways; Session:8 18

Slide 16

Workshop Modernisation

- Central Organisation for Modernisation of Workshops (COFMOW) was established in 1979 to implement the Modernisation Programme of Workshops.
- It has emerged as a specialized organization on machine tool technology.
- It has prepared (till March, 1995) 845 technical specifications for sophisticated tools evaluated over 3450 offers of machine tools from Indian and Foreign suppliers and procured M&P worth Rs. 578 crores.

Training Module on Audit of Railways; Session:8 16

Slide 19

Work Order System and On-cost Charges

Contd.

- On Cost Work Orders-
  - for booking On Cost charges separately for Shop On Cost & General On Cost.
- Manufacturing Work Orders-
  - for ascertaining the cost of Semi-manufactured material.

Training Module on Audit of Railways; Session:8 19

Slide 17

Workshop Modernisation Contd.

- It is now extending its role to new areas, some of which are:
  - Conversion of M.G. machines for use in B.G.
  - Plan for rebuilding/reconditioning of older machines to avoid procurement of new machines etc.
- COFMOW has undertaken the work for preparing reports on
  - Disposal of surplus machines
  - Preparing a standard layout of facilities for overhauling and maintenance of draft gears.

Training Module on Audit of Railways; Session:8 17

Slide 20

On-cost Charges

- These are charges incurred in various shops within the workshop apart from direct expenditures.
- These charges cannot be charged direct to the cost of the component; such as
  - Proforma On Cost,
  - General On Cost and
  - Shop On Cost.

Training Module on Audit of Railways; Session:8 20

Slide 21

**On-cost Charges**

- **Proforma On-Cost (POC)**
  - Includes all indirect charges not included in the cost of work done but which would be so included in the commercial undertaking.
- **General On-Cost (GOC)**
  - Includes all On Cost other than Proforma On Cost that is incurred in common with the shop or department.
- **Shop On-cost**
  - Includes all On Cost incurred within an accounting unit such as shop or departmental section which cannot be directly charged to the works.

Training Module on Audit of Railways; Session:8 21

Slide 24

**Basic features of JOB Costing System**

- **Estimation of the time spent and the materials should be used.**
- **Systematic Comparison of the**
  - results of actual performance with such estimates.
  - standards set by technical staff with the results actually obtained.

Training Module on Audit of Railways; Session:8 24

Slide 22

**Job Costing**

- **Repairs and Maintenance of rolling stock and other properties required for Railway operations have to be carried out by using a multitude of spare parts and fittings**
- **The cost of such spares and fittings has to be ascertained with a fair degree of accuracy which is termed as Job Costing of such part.**

Training Module on Audit of Railways; Session:8 22

Slide 25

**Classification of Job Costing / Process Costing**

- **Fixed Cost-**
  - The costs which are tend to be constant at all levels of production.
- **Variable Cost-**
  - these tend to vary with the volume of output. Any increase in the volume of production results in an increase in the variable costs & vice-versa.
- **Semi-Variable or Semi-fixed Cost-**
  - partly fixed and partly variable in relation to output.

Training Module on Audit of Railways; Session:8 25

Slide 23

**Job Costing-Objectives**

- **The Object of JOB Costing is to compare the costs of the similar articles manufactured-**
  - from time to time in the workshops and finding out reasons for variation in costs; and
  - in the workshops with those manufactured on other Railways or with the market-price of similar articles.

Training Module on Audit of Railways; Session:8 23

Slide 26

**Estimates and Completion Reports**

- **The stores are classified into the following categories:**
  - **Category A:**
    - constitute 70% of the total value of all stores stocked.
  - **Category B:**
    - constitute 20% of the total value of all stores stocked.
  - **Category C:**
    - constitute 10% of the total value of all stores stocked.

Training Module on Audit of Railways; Session:8 26

Slide 27

**Estimates and Completion Reports**

- Estimate sheets in respect of A and B category have to be vetted by Accounts Finance.
- In case of 'C' Category items the Estimate sheets need not to be vetted.
- Ministry of Railways consolidates the demand of all zonal Railways and processes them for import of stores or placed orders for purchases.

Training Module on Audit of Railways: Session:8 27

Slide 30

**Workshop Manufacturing Suspense**

- The difference, if any, is treated as "difference between time/tally sheets and LPS on account of average rates".
- The net difference at the end of March in this WO should be adjusted as 'Under and Overcharges On cost'.
- Postings in the Labour Sub-Ledger are transcribed to the Labour Schedule to prepare summary of labour charges for the entire workshop.

Training Module on Audit of Railways: Session:8 30

Slide 28

**Estimation of Requirement and Requisition Compliance**

- Each depot prepares estimate sheets on the basis of their requirements and sends it to Controller of Stores for procurement process.
- The primary function of a Stores Depot is to supply materials against requisitions.
- Depot officer should send to Controller of Stores once a fortnight a statement of pending requisitions to enable them to take prompt steps to remedy defects in recoupment of stores.
- However, in every monthly PCDO, each depot officer communicates the position to COS.

Training Module on Audit of Railways: Session:8 28

Slide 31

**Preparation of Monthly Account Current of the transactions pertaining to Workshop Manufacturing Suspense**

- Shows Opening Balance, Debit, Credit and Closing Balance.
- Should be posted from the following records:

Opening Balance:	From Account current of the previous month.	
Debit:	Labour:	From labour Schedule.
	Cash:	Debit to WMS A/c on account of contractor's payment from Monthly Classified Abstract of cash transactions.
	Stores:	From Daily Debit Summary of I/Notes.
	Other charges:	From Stores Summary Sub-ledgers.
	Freight & POC:	From Schedule of POC.
Credit:	From Summary of Out-turn Statement Part I.	
Closing Balance:	OB+Debit-Credit.	

Training Module on Audit of Railways: Session:8 31

Slide 29

**Workshop Manufacturing Suspense**

- Labour Charges
  - On receipt of time/tally sheets in respect of hourly reconciliation and evaluation of time taken on each job in Accounts Office, total labour charges against each WO are summarized in the Labour sub-ledger.
  - The amount of all salary, TA and labour bills chargeable to workshop manufacture "Labour Suspense" is noted in the Register of Shop Labour Charges in Accounts Office separately for each Shop and the total of such through Labour Sub-Ledgers.

Training Module on Audit of Railways: Session:8 29

Slide 32

**Checklist of Important Functions in the Field of Materials Management**

- Material Requirement
  - Planning & Programming Stock items and Non-stock Items, Recoupment/Estimate Sheets for stock items, Anticipated Annual Consumption (AAC), Methods of forecasting AAC, Provisioning of the quantity.
- Effective Purchasing
  - Importance, Basic objectives, Canons of Financial Propriety, Centralised Agencies for the procurement of stores, Registration of Vendors, Mode of tendering- Advertised Tender, Bulletin Tender, Spl. Ltd. Tender/Ltd. Tender and Single Tender.

Training Module on Audit of Railways: Session:8 32

Slide 33

Checklist of Important Functions in the Field of Materials Management Contd.

- Inventory Control-
  - Scope and meaning, Various costs related to inventory-cost of ordering inventory, carrying cost etc.
  - Systems of Recoupment: Maximum/Minimum System and Annual Review System-Advantage of Annual Review System.
  - Computer Aided Techniques: Inventory Management by Exception Reports, future scope of Computer aided Inventory Control-Liability Register, Imprest Stores, Forecasting of Demands, Vendor Evaluation.

Training Module on Audit of Railways: Session:8 33

Slide 36

Checklist of Important Functions in the Field of Materials Management Contd.

- Disposal of Scrap
  - Auction Sale,
  - Tender Sale,
  - Direct Sale and
  - Sales to employees.
- Macro-overview
  - Importance of Materials Management in developing Countries, Team work of consumers, Finance, Production and Stores. Creation of new disciplines like Value Analysis, Product Evaluation and Standardization Cell for optimum use

Training Module on Audit of Railways: Session:8 36

Slide 34

Checklist of Important Functions in the Field of Materials Management Contd.

- Receipt, Inspection, Issue, Material Handling and Transport
  - Receipt of Materials in Warehouses, Weighment, Inspection, etc.
  - Inspection by consignee on receipt, Consignee's right of rejection, Handing of rejected Stores.
  - Storage-Precautions during storage, special godowns, strong rooms for costly stores preservation.
  - Issue and Despatches & Transportation-Store Vans.

Training Module on Audit of Railways: Session:8 34

Slide 37

Audit points on Railway Workshop

- Audit of Systems of Cost Accounting
  - is an essential requisite of a modern workshop and it may be elaborated to such an extent as to result in considerably increased expenditure in accountancy.
  - The total cost incurred in workshop may, be compared with the total cost of operations to see that it does not become unduly disproportionate.

Training Module on Audit of Railways: Session:8 37

Slide 35

Checklist of Important Functions in the Field of Materials Management Contd.

- Value analysis-
  - Differentiation between value and cost,
  - Questionnaire for value analysis known as analytical method:
    - Can cheaper materials be used?
    - Can it be bought more cheaply?
    - Can you save on finish?
    - Can you use a Standard Part?
- Standardization
  - Standardization of Materials, Simplification Rationalization and Variety Reduction.
  - Weeding out obsolescent & duplicate items.
  - Material codification system.

Training Module on Audit of Railways: Session:8 35

Slide 38

Audit points on Railway Workshop Contd.

- Reconciliation of Cost Sheets with Accounts
  - It is to be seen that a reconciliation of cost sheets with financial accounts is carried out efficiently as prescribed.
- Statement Cost Analysis for the Batch Order Completed
  - On completion of each batch order, print out on the above statement should be reviewed in audit in respect of month to the extent prescribed.
  - "The comparative statement of utilisation of man-hours for the month prepared manually" should also be scrutinised.

Training Module on Audit of Railways: Session:8 38



Slide 39

Scope and Standards of Field Audit

- The selection of projects/schemes in a Railway workshop or Production Unit for review should be done with utmost care.
- After selection of areas and methods of review audit plan is chalked out for collection of necessary data.
- The approach of review should be systematic, methodical, logical and routine.

Training Module on Audit of Railways; Session:8 39

Slide 42

Guidelines for Audit

- Audit should also see whether
  - Objectives of the scheme have been clearly defined and are in conformity with the policies of the Government.
  - A good monitoring /Management Information System (MIS) exists for collection of reliable data.
  - The performance is efficient.
  - Cost schedules are being adhered to.
  - There has been serious avoidable delays in the progress of works due to efficient and defective handling of works
  - Performance/Cost compares with the results obtained in respect of similar schemes in other fields in the public sector.

Training Module on Audit of Railways; Session:8 42

Slide 40

Scope and Standards of Field Audit  
Contd.

- The review is aimed at examination of systems, procedures, planning, implementation of operational performance of project/scheme etc.
- The review should cover mainly the economic aspect.
- It is to be borne in mind that the Railways are an important instrument of economic and industrial development of backward areas; the review should thus cover socio-economic aspects as well, wherever applicable.

Training Module on Audit of Railways; Session:8 40

Slide 43

Few more Audit points on

- Workshop Estimates- should be checked
  - along with contracts, contractor's bills and completion reports.
  - that all the contracts are in conformity with the estimates.
  - The propriety of justification for the expenditure it is proposed to incur.
  - The incidence and classification or allocation of the charges.
  - The existence of the sanction of the competent authority.
  - If any authorised rolling stock is condemned or otherwise reduced without being replaced, its original cost is written back from Capital to DRF in the same year.

Training Module on Audit of Railways; Session:8 43

Slide 41

Guidelines for Audit

- During audit it is to be ensured
  - Whether the sanctioning & spending authorities have observed economy.
  - Whether money is spent as per work orders
  - That the rate and scale of expenditure is justified under the circumstances.
  - Whether there have been serious avoidable delays.
  - Whether there has been any serious lapse or system lacunae or recurring losses.
  - How far a particular activity is producing results expected of it.
  - How far the physical targets have been achieved within the existing time frame.

Training Module on Audit of Railways; Session:8 41

Slide 44

Few more Audit points on      Contd.

- Completion Report
  - Sanction of the Railway Board is taken in case of alteration in the type or numbers of rolling stock consisting of material modification.
  - Capital cost is correctly assessed for the purpose of calculating the Half-yearly or Yearly interest recoverable from other Govt. Departments concerned.

Training Module on Audit of Railways; Session:8 44

Slide 45

Few more Audit points on Contd.

- Absentee Statement, Gate Attendance, Time Sheets, Muster Roll & Labour Pay Sheet. Overtime Sheets- It should be seen
  - that the method of booking labour against various works is correct and the initial records are correctly maintained
  - there is a proper system of recording labourers entering the shops.
  - That a list of the absentees in various shops is prepared daily from such record.
  - The accuracy of the time sheet, may be verified by actual count during the visits to the staff

Training Module on Audit of Railways: Session:8 45

Slide 48

Few more Audit points on Contd.

- Manufacturing Accounts
  - There is correct and reliable record of the quantity of materials received
  - The waste products are utilized or properly disposed of
  - There exists a proper system of transmitting all manufactured articles to Stores Department

Training Module on Audit of Railways: Session:8 48

Slide 46

Few more Audit points on Contd.

- Labour Charges / Time Sheets / Job Cards / Muster Rolls/ Cooly Labour
  - The total Time Sheets/Job cards are agreed with the muster rolls by the Time office & that
  - The rates of pay shown in MR should be compared with those shown in Time Sheets
  - The rates of pays shown in the MRs should be checked with the scale of wages laid down by the competent authority.
  - That the proper record of attendance is maintained for cooly labour for whom no time sheets are usually prepared.

Training Module on Audit of Railways: Session:8 46

Slide 49

Few more Audit points on Contd.

- Workshop General Register (WGR)—checked to see that
  - WGR prepared after collecting all charges on account of labour and stores or Work Order
  - it is prepared from the allocated abstracts and summaries of labour and stores
  - That the out standings are such as should form a charge against Workshop Suspense
  - The operations are all current and covered by competent sanction
  - That credit items in the details of balances are noted for immediate adjustments.

Training Module on Audit of Railways: Session:8 49

Slide 47

Few more Audit points on Contd.

- Requisition of issue tickets, Issue Notes, Daily Summaries, Monthly summaries
  - All requisitions are signed by responsible officer; and
  - Requisitions complied with are duly acknowledged by the receiving officer.
  - Issue notes are compared with requisitions.
  - Pricing of material is correct.
  - That the allocation to Work orders is correct.
  - It should be seen that the monthly summaries of issue of stores received from Stores Accounts Office agree with the total of the daily summaries of issues.

Training Module on Audit of Railways: Session:8 47

# **Session: 9**

## **Safety Aspects and Signalling Systems in the Indian Railways**

<b>Session Title: Safety Aspects and Signalling System in Indian Railways.</b>		Session Guide
<b>Instructor's Guide</b>	Reference	Participants' Response
<b>Session Overview</b>		
<b>Welcome</b> participants to the session and remind them that their active participation is critical for the success of each session.	Lecture	
<b>Learning Objective</b>		
<b>Inform:</b> Given the inputs of signalling systems in the Indian Railways, safety aspects, maintenance of accounting of signalling, stores and tenders etc. through group discussion, lecture and PowerPoint slide show, the participants will at the end of the session acquire basic concepts of signalling systems of the Railways, which will help them to focus on audit issues in the practical work context.	Lecture	
<b>Basic Concepts</b>		
<b>Discuss:</b> <ul style="list-style-type: none"> <li>● Signalling System- Operational Points and Signals, System of Train Working</li> <li>● Budget Estimates, Expenditure, Budgetary Control and Maintenance of Accounts</li> <li>● Signalling stores and their accounting</li> <li>● Tenders</li> </ul>	Lecture and PowerPoint Slide Show <b>Session 9 Audit of Safety and Signalling</b>	
<b>Summarise:</b>		
<b>Distribute</b> Participants' Note. <b>Tell</b> the participants that during the session, we discussed Signalling System-Operational points and Signals, System of Train Working, Signalling Stores and Accounts. <b>Invite</b> questions on themes discussed. If participants have any doubts/clarifications about themes, clarify the same. Answer participants' queries. <b>Thank</b> the participants and bring the session to a close.	Participants' Note Session 9	

**Training Method:** Interactive Lecture and Power Point Slide Show.

**Materials Required:** Power Point Slides, Projector, White Board, Marker Pen and Participants' Note.

## **Session Title: Safety Aspects and Signalling System in Indian Railways.**

### **Session Overview:**

Indian Railways serve as the principal passenger and freight carrier in the country. Signal and Telecommunication System (S&T) plays a vital role in Railway Operation. In fact, signals are the silent sentinels providing safety in train operation. Different wings of the Railways viz. Civil, Mechanical, Electrical, Traffic, Stores and Workshops, Personnel etc. are different essential wings of the Railway to facilitate building up and carrying on railway operation.

The S&T provides the critical core in this mammoth railway operations system. It makes safe railway operations possible. With the passage of time and development of technology, railway operation has undergone change and development. Hence signalling systems need continuous updating to meet the growing needs of traffic and improved safety. Modernisation of railway operations include modernisation of S&T systems.

To cope with the increasing freight and passenger traffic needs and to ensure adequate safety standards, it is necessary for the Indian Railways to steadily modernize its S&T system. With a view to bringing about substantial improvement in productivity and efficiency of Railways, Indian Railways Corporate Plan (1985-2000) assigned top priority to the technical upgradation of the S&T systems.

The Planning Commission in its IXth Plan identified strengthening of line capacity of Indian Railway System as the main thrust area. The Plan in its investment strategy observed that the highest priority for taking up new projects should be given to projects, which augment the capacity of the Railway system in the high density

corridors, apart from investments needed to ensure safety and reliability of services.

Modern signalling and telecommunication systems help in achieving the twin objectives of augmentation of line capacity and reliability of services. The main objective of modernization of the S&T system of the railway is thus: (i) to improve safety by providing modern safety devices such as track circuiting, block proving by axle counter, auxiliary warning system, etc., (ii) to provide cost effective solutions to increase line capacity by introducing systems such as Centralised Traffic Control, Automatic Block Signalling, Intermediate Block Signalling etc., and (iii) to achieve operational efficiency through modern signalling systems such as Panel Interlocking, Route Relay Interlocking, etc. and modern telecommunications such as Digital Electronic Exchanges, Digital Microwave, Optical Fibre Communication, Railnet etc.

### **Organisational Set-up**

At the apex level, i.e. at the Railway Board level, there is no separate member for signalling department and it is under the control of Member Electrical. The Signal and Telecommunication Directorates function under Additional Member (Signal) and Additional Member (Telecommunication). These Directorates are responsible for taking policy decisions on matters relating to S&T. At the Zonal Railway level, the Signalling department is under the control of a Chief Signal & Telecommunication Engineer who reports to the General Manager of the Zone. The efficient upkeep of S&T assets is responsibility of Open Line Organisation of the S&T Engineering Department. The major construction activities of the Railways may be under the administrative control of a Chief Signal & Telecommunication Engineer (Construction) reporting directly to the General Manager of an Open Line or under the independent administrative control of a Chief Administrative Officer(Construction) or General

Manager(Construction) reporting directly to the Railway Board.

The Chief Signal & Telecommunication Engineer is the administrative and professional head of the Signal & Telecommunication Department and is responsible to the GM for the efficient and economical working of the department.

The Chief Signal & Telecommunication Engineer (CSTE) may be assisted in his work by one or more Chief Signal Engineer (CSE) or Chief Telecommunication Engineer (CTE). The CSE and CTE are in independent charge of their respective areas of control. Their work is coordinated by the CSTE who is responsible to the GM. CSTE, CSE and CTE are assisted by a team of officers such as Deputy CSTE, Sr. STE and ATE. CSTE(Con) provides necessary direction and control for the efficient and economical execution of all works under his charge. CSTE (Con) is assisted by a team of officers including Sr. DSTE/DSTE, Sr. STE and Assistant STE. The CSTE(Con) maintains liaison with the Open Line Organisation and follows the general policies and procedures laid down for the execution of works. In cases where a different policy or procedure becomes necessary to be followed he does so after due consultation with the Open Line Organisation.

CSTE (Con) also exercises necessary budgetary controls within the allotment of funds at his disposal and coordinates with CSTE for compilation of budget at every budgetary stage.

At the divisional level, a Signal and Telecommunication Engineer of appropriate grade is in charge of the S&T Branch charge. He is responsible to the DRM for maintenance as well as proper function of the installations under his charge. He is responsible to the CSTE for all technical matters. He may be assisted by a team of officers of the same grade or in lower grade.

CSTE lays down the duties of the various officers of the S&T Branch of the division.

Besides, the following are extra divisional organisations of the S&T department.

- S&T Workshop;
- S&T Training School;
- Microwave Organisation;
- Field Units of Construction Organisation;
- Any other unit designated by the Railway.

Each of these organisations is under the control of an officer of appropriate grade who is responsible for its efficient functioning to the CSTE directly or through a nominated officer.

The following are the technical staff of the S&T department.

- Signal Inspectors and Artisan Staff;
- Drawing Office Staff;
- Supervisory and Artisan of S&T Workshop;

## **Signalling system**

### ***Operation of Points and Signals***

- Earlier, signals and points at most of the stations were mechanically operated from two cabins, located at either the end of a station, or from a central cabin. With the use of electrical signalling equipment such as panel interlocking (PI), Route Relay Interlocking (RRI), Solid State Interlocking (SSI), etc., there is no limit on the distance upto which points and signals could be operated from a centralized location. SSI is the most modern interlocking system. It is a micro-processor-based interlocking and provides better reliability and consumes less power than PI/RRI.

### ***System of Train Working***

- System of train working mainly used on the Railways is known as block system. This system is based on the principle of maintaining a fixed minimum space interval between trains on a section. The types of system for train working in the Indian railways are: Token/Tokenless Instruments, One Train Only System, Intermediate Block Signalling and Automatic Block Signalling. Out of these systems Automatic Block Signalling(ABS) is the most modern system. In this system, signals are cleared automatically for the passage of a train after maintaining a specified distance behind preceding train.

## Augmentation of line capacity through Automatic Block Signalling(ABS)

- Indian Railways Corporate Plan envisages that it is possible to achieve wide range of increased line capacities with different types of signalling. Tokenless Block Working system increased line capacity from 17 to 21 trains each way on a single line section. Computer aided Centralised Traffic Control can further increase line capacity to about 35/40 trains each way. Intermediate Block Signalling can increase sectional capacity to 65 trains each way on a double line section and ABS can increase it further upto 100 trains each way.

### Signalling Indicators

Following types of signals are presently in use on the Indian Railways:

- 2 - aspect lower quadrant signalling(LQ)
  - Multi-aspect upper quadrant signalling(MAUQ)
  - Multi-aspect colour light signalling(MACL)
- MACL is the most reliable type of signalling in use on Indian Railways. Colour light with signals with powerful and penetrating light provide better visibility and drivers are able to sight them from far away and act upon their indication. Besides, these types of signals are more reliable and require less maintenance.

### Axle Counters

- Axle Counters are electronic devices employed for detecting presence of a vehicle on a defined length of a railway track. This can also be used as a substitute for conventional track circuiting even in locations where steel sleepers are used. Axle counters also help in reduction/elimination of block operation time thereby contributing to increase in line capacity. In Indian Railways, Axle Counters are mainly used for block proving (process of proving that there is no vehicle in the entire length of block section).

### Audio-Frequency Track Circuiting (AFTC)

- Indian Railway Corporate Plan (1985-2000) envisaged introduction of Audio frequency/high voltage impulse track circuit for automatic block

signalling devices which would permit substantial improvement in reliability.

### Monitoring of Signalling Equipments through Data Loggers

- Data logger is a microprocessor based equipment which monitors the health of the signalling equipment and logs the events occurring in the signalling function of yard through the energised contact of relays. It acts like a 'Black Box' which can scan, store and process the data for generating various user-friendly reports and also envisaged reduction in signalling failures.

### Telecommunication system

- Telecommunication is an essential input for operating a rail transport system efficiently. The telecommunication facilities created in the Railways serve two main purposes: (i) Operational: for controlling and monitoring day-to-day train movements and (ii) Administrative: for controlling basic data from Activity Centres like stations, marshalling yards, interchange points, goods sheds, parcel offices etc., for planning train movements, giving instructions to these centres for deployment of rolling stock, locomotives and crews and transmitting data in respect of passenger reservations, meal messages and other customer services.

### Operational Telecom facilities

- The operational requirements such as control, block, traction power, traction loco, emergency and other circuits are catered through departmental and BSNL underground cables, overhead alignment, microwave, optical fibre cables, quad cables.

### Administrative Telecom facilities

- Railways' Administrative Telecommunication requirements such as control, coordination and collecting data from important activity centres are catered through administrative circuits. These circuits interconnect Zonal and Divisional Headquarters with important activity centres.

### Modernisation in Telecommunication

- Optical Fibre Cable (OFC) system of communication has several advantages over conventional telecom cables or radio relay communication. It is totally immune to induction effect of the AC traction or interference from thyristor. While providing all the advantages of radio relay communication system, OFC has the potential of making much larger number of

channels available as compared to the conventional cable system.

### **Duties of S&T Engineers**

The S&T Engineer in charge of maintenance or construction is generally responsible for –

- Installation and maintenance of all S&T equipment in a satisfactory and safe condition;
- Observance of the extant rules and procedures and orders and circulars issued by the appropriate authority from time to time;
- Preparation of plans and estimates and safe execution of works;
- Ensuring that all important inspection notes of higher authorities receive prompt action;
- Coordination with Engineering and other branches in case of combined works;
- Undertaking periodical inspections;
- Analysing the failure reports submitted by the inspectors and taking remedial measures;
- Periodical verification of the materials at site;
- Obtaining sanction of Commissioner of Railway Safety for new signalling works or alterations and additions to the existing stock;
- Ensuring supply of approved quality materials and tools for the installation and maintenance of the equipments;
- Control over expenditure in relation to budget allotments and sanctioned estimates;
- Submission of proposals for Revenue and Works Budget alongwith periodic reviews;
- Ensuring strict discipline etc.

### **Duties of Chief Signal Inspectors**

The more important ones being-

- Exercising supervision over the work done by the S&T Inspectors and maintenance staff;
- Testing, overhauling and carrying out alterations to the existing S&T installations;
- Carrying out work in an emergency on his own initiative and responsibility under prior intimation to superiors by a message on control phone or by a telegram;
- Carrying out inspections as per approved schedule.

### **Duties of Signal Inspectors**

The more important ones being-

- Efficient and proper maintenance of all signalling and interlocking equipments;

- Assisting the Chief Signal Inspector in execution of works;
- Carrying out work in an emergency on his own initiative and responsibility under prior intimation to superiors by a message on control phone or by a telegram;
- Carrying out inspection and testing of all equipments at least every month or as per orders of the appropriate authority issued from time to time.

### **Inspection Certificate**

- Each inspector shall submit an inspection and testing certificate monthly for each station/installation inspected by him during the month in the prescribed form to the Sr. Divisional/Divisional S&T Engineer;
- The report on each foot-plate inspection must be promptly submitted to the Sr. DSTE/DSTE in the prescribed form;
- At the end of each quarter Chief Signal Inspector shall certify that all signals on his section have been jointly inspected both by day and by night. He shall also highlight defects and deficiencies noticed during this inspection indicating assistance required;
- The inspection, testing and overhauling certificates shall be filled in progressively at the stations immediately an inspection or testing or overhauling has been done;
- Each inspector shall send a separate certificate that all these stations under his charge have been inspected as required under the prescribed rule. If all the stations have not been inspected, the names of stations left out and reasons therefore shall be furnished;

### **Budget Estimates, Expenditure and Budgetary Control and Completion Reports**

#### **Budget Terms**

- **Budget Estimate:** The S&T department of a Zonal Railway has to prepare estimates of expenditure expected to be incurred in a year and submit them on prescribed dates well in advance of the beginning of the year to the Railway Board for obtaining sanction of the Parliament or the President. Such estimates are called budget estimate.
- **Demands for Grants:** on the basis of the budget estimates received from the various zonal railways the Railway Board prepare their



'Demand for Grants' and present them to the Parliament or the President for sanction;

- **Grants and Appropriation:** The 'Demands for Grants' as finally approved by the Parliament are called Budget Grants and those sanctioned by the President without reference to the Parliament are called 'Appropriations';
- **Budget Orders and Allotments:** The Railway Grants and Appropriation for a year are distributed by the Railway Board to the Zonal Railways through 'Budget Orders'. The budget orders are accompanied by the Budget Documents. The Grants and Appropriation distributed to the various divisions and other pending units are called 'Budget Allotments';
- **Budget Documents:** The complete budget is printed in the form of books such as
  - Demands for Grants;
  - Explanatory Memorandum showing the financial results of the year;
  - Works, Machinery and Rolling Stock Programme;
- **Re-appropriation:** The transfer of funds originally assigned for expenditure on a specific object to supplement the funds sanctioned for another object is called 'Re-appropriation'.
- **Review of Expenditure:** The sufficiency or otherwise of the sanctioned budget allotments shall be reviewed periodically by CSTE on the basis of expenditure actually incurred upto the time of review and the anticipated expenditure during the remaining portion of the financial year. This is known as review of expenditure.

### Revenue and Works Budget

Budget estimates of the S&T department comprise mainly of the following:

- Estimates of working expenses;
- These are based on the working expenses for the repairs and maintenance of signalling, interlocking and telecommunication services and comprise estimates of expenditure against demand no. 3,7 and 8;
- Works Budget: 'Open Line Works Budget' otherwise known as 'Annual Works Programme' comprises estimates of requirements for Works against demand no. 16;
- Plant and Machinery Programme comprises estimates for requirement of Machinery and Plant against demand no. 16;

### Estimates for Working Expenses or Revenue Budget

- The Revenue Budget or Estimate of Working Expenses is compiled in the prescribed form in the Head Quarters Office of the Zonal Railway viz. Office of the CSTE on the basis of proposals submitted by the divisions;

### Works Machinery and Rolling Stock Budget

- Detailed instructions for preparation and submission of Works, Machinery and Rolling Stock Budget are contained in Chapter-III of Indian Railway Financial Code, Vol.-I. The classification of expenditure by primary units of expenditure are contained in volume-II of the financial code;
- Compilation of Plant and Machinery programme
  - The detail of instruction for preparation and submission of the Plant and Machinery programme are contained in Chapter-XV of the Indian Railway Code for the Mechanical Department (Workshop);
  - The requirements of machinery in S&T workshop shall be collected and shown in Plant and Machinery Programme;
  - The description of the machinery, number allocation, cost etc. shall be shown in the prescribed forms and submitted along with the programme. This programme is submitted 15 months in advance of the financial year.

### Maintenance of Accounts

- Rules in regard to the maintenance of accounts are contained in Chapter-XIV of the Indian Railway Code for the Engineering Department.

### Accounting

- The expenditure incurred is brought to account through various vouchers. Subject to such powers as may be delegated to him, the Sr. DSTE/DSTE may incur expenditure on all ordinary maintenance work and establishments upto the limits of the provision in the Revenue Budget Estimates sanctioned for the unit for the year.
- All vouchers, such as debit note for stores supplied, freight bills shall be care fully scrutinised before acceptance as to the reasonableness and propriety of the debits

raised. Wherever necessary, such debits shall be co-related and checked with the initial records in the office, such as indents and work orders on workshop and necessary endorsements made thereon.

### **Control over expenditure**

- The manner in which the budgetary and expenditure controlled is to be exercised is indicated in Chapter-V of the Indian Railway Financial Code;
- When passing requisitions for materials and tolls, for works on maintenance, and also while sanctioning temporary and seasonal labour, Sr. DSTE/DSTE shall ensure that the amounts involved are within the allotments and also within provision in the sanctioned estimates;
- Before execution of agreements and work orders with contractors the Sr. DSTE/DSTE shall ensure that these have been carefully checked in every respect;
- Rates allowed in bills received from firms shall be carefully scrutinised before they are passed for payments.

### **Completion Reports**

- Rules in regard to the preparation and submission of Completion Reports are contained in Chapter-XVII of the Indian Railway Code for the Engineering Department.

### **Planning, Estimating and Survey Planning**

- The process of programming Works, Survey as well as Rolling Stock, Machinery and Plane in advance, deciding their relative priorities, preparing necessary justification and estimates, making available funds for their execution within the ceilings prescribed and including them in the "Works, Machinery and Rolling Stock Programme" is termed planning.

### **Initiation of Works Programme**

- Detailed instructions for preparation and submission of Works Programme are contained in Chapter VI of the Indian railway Code for Engineering Department.
- Programming of S&T Works may be initiated as a result of proposals made by the Signal, Operating or other Departments for periodic replacement of worn out assets with or without improvements or for meeting operational requirements or for improving the safety of train

operation or for provision of amenities to passengers,

- Works may be initiated either on a Division or at the Railway Headquarters. Works initiated on the Division shall be first examined by the Divisional Officers. Where there is sufficient justification, the proposal after approval by the Divisional Railway Manager shall be forwarded to the Headquarters office along with the remarks by the Accounts Branch for scrutiny and examination by the Heads of Departments concerned. If the work is approved by them and concurred in by the Financial Advisor & Chief Accounts Officer(FA&CAO), it is noted for inclusion in the Works Programme of the ensuing year.
- Works initiated by the Headquarters Office shall be sent to the FA&CAO for obtaining concurrence and thereafter included in the Works Programme. In case it is, however, desired to obtain the estimate from the Division, the Division may be asked to process the work and action taken accordingly.
- A work should be considered as remunerative only if it satisfies the test of remunerativeness as embodied in Indian Railway Financial Code.

### **Estimates**

- Instructions regarding the different kinds of estimates and their preparation are contained in the Indian Railway Code for the Engineering Department.

### **General instructions applicable to estimates**

- While preparing the Abstract Estimate in accordance with the Code Rules, the expenditure for Stores may be grouped under Cabin Equipments, Point gears and connections, Signal fittings and connections, Cable and line wires, Track Circuits, Block Instruments, Station Master's Control Instrument, Control and Cabin telephone etc. besides Labour, Tool and Plant, Establishment Charges, Freight and Contingencies, Works to be done by other Departments are to be included where necessary.
- While preparing the detailed estimates the following guidelines should be observed:
  - Details of cost of cabin, staff quarters and other buildings and electric power connections are to be included by obtaining

them from the departments concerned and to be provided for under separate sub works.

- Establishment and Supervision charges, are to be included. Additional weightage for works to be done under traffic conditions is to be provided.
- Provision has to be made for additional quarters required for additional maintenance staff to be posted as a result of the scheme. Provision is also to be made for additional stores / office accommodation where necessary.
- For preparing estimate for Line Capacity Work, the Operating Department will advise the S&T Department of the detailed traffic requirements. If it involves preparation of a plan or sketch for estimating purposes, the S&T Department will arrange to do so and detailed estimate will be prepared only after the arrangements shown on the plan or sketch agreed to by the Operating Department. In other cases, the estimates will be prepared on the basis of the requirements furnished by the Operating Department. In both cases, the justification for the proposed work will be furnished by the Operating Department together with the anticipated financial implications.
- A similar procedure will be followed for works to be executed for other departments like Electrical, Civil Engineering etc.
- Where works are customarily executed through the agency of contractors, each Divisional Office will maintain the Schedule of Rate issued under the authority of CSTE / CSTE (CON). The schedule of Rates may be reviewed and revised by CSTE / CSTE (CON) every five years or at shorter intervals as considered necessary. No variation in the Schedule of Rates is permissible without the specific authority of CSTE / CSTE (CON).
- Each Divisional Office will maintain the Price Lists of Stores as issued by the Stores Department.
- The Divisional S&T Engineer will be in possession of copies of the authorized Schedule of Rates and Price Lists of Stores and amendments advised to him from time to time.

### **Reports Accompanying Estimates**

The reports will generally include the following:

- A clear description of the work to be carried out and the object to be gained by its execution together with such information as will enable the sanctioning authority to appreciate the necessity for the work.
- Reasons for the adoption of the proposed layout or design with special reference to any variations from usual practice and its special features if any.
- When the project is of a nature involving scientific points and considerations of special characters such as a new S&T System not tried out before, the reports will contain a complete account of the basis on which every part of it has been framed, the various considerations, in regard to S&T details, economy of construction, utility of practical working of the Project when carried out and the method by which it is proposed to execute any portion of the work involving un-usual difficulties of construction if any.
- In case of work of an important nature like Centralized Traffic Control, Automatic Signalling, a complete account of the various considerations in regard to the engineering details, economy of construction and utility of the Project will be given. Any local considerations which may affect the Project will also be fully detailed.

### **Surveys**

- General instructions of conducting surveys for Railways Project are contained in the Indian Railway Code for the Engineering Department.

### **Surveys for new Lines, Line Capacity Works, Electrification**

- Engineering-cum-Traffic Surveys will be carried out for new lines, conversions, doublings and other line capacity works costing more than Rupees one Crore before inclusion of such works in the Works Programme.

### **Surveys for Signalling Works**

- Field surveys will be carried out for the following categories of S&T works costing more than Rupees fifty Lakhs before inclusion in the Works Programme.
  - Relay Interlocking of Major yards;
  - Mechanization of Marshalling Yards;
  - Microwave and other multi-channel communication systems;
  - Extensive integrated telephone networks;

- Sophisticated signalling scheme including Auxiliary Warning System, Centralized Traffic Control etc.

### Notes to be made in the field

- During the survey, careful notes with data will be made at site from personal enquiry and observation, regarding any information likely to be useful in working out the details of the Projects, and in determining the prospects of the proposal. The following points will receive special attention:
  - Availability of Wooden/concrete sleepers;
  - Availability of power supply at the site;
  - Whether climate condition will suit the type of equipment to be installed;
  - Special problem like rocky soil, existence of wide rivers which may have to be traversed by cables or overhead lines, etc.;
  - Gradients on the section particularly if the project is for provision of Automatic Signalling;
  - Detention to trains that can be saved; additional services that can be introduced.

### Expenditure on Surveys

- Zonal Railway Administrations have no power to undertake Surveys on their own. After a survey is included in the sanctioned budget, the General Managers can sanction Survey Estimates costing up to Rs. 1 lakh.
- If it is decided to undertake a Survey in connection with any proposal/modification in S&T System, an estimate of the cost of the proposed survey will be prepared, and the information collected in the course of the preliminary investigation, if any, will be embodied in the report accompanying the Estimate of the Survey.
- The proposal for Surveys will be submitted to the Railway Board well in advance to enable necessary provision being made in the Budget.
- The Budget allotment for preliminary Survey of a work will be charged under Demand No. 2 and when final estimate for that particular work is sanctioned, the amount charged under Demand No. 2 will be transferred to the sanctioned estimate of the Project.

### Imprest Amount

- The official-in-charge of the Survey will be provided with an adequate Imprest. He will be

responsible for maintaining all accounts with necessary vouchers.

### Survey Teams

- A Signalling team will be provided in Survey Estimates for projects like Doublings, Remodelling, Conversions, New Lines, Railway Electrification including Techno-economic Surveys, Feasibility Studies, etc., to carefully study the needs of the Traffic and to make provision for Signalling equipment accordingly duly taking into account the age and condition of the existing equipment, if any.
- The period for which the Signalling team is to be catered for in the Survey estimates will be commensurate with the workload in each case and will be decided by the CSTE in consultation with the FA&CAO of the Railway concerned while finalizing the Survey Estimate.
- The requirements of the Signal Department will be obtained from the CSTE by the Chief Engineer while preparing the Survey Estimates for such Projects.
- Similarly, in Survey estimates for S&T Projects, suitable provision will be made for other Departments like, Traffic, Engineering, Accounts, Electrical etc., as found necessary.
- The Signalling team will work under the Administrative and Technical Control of the CSTE/CSTE(CON) for Surveys of Signalling works and for Signalling portion of the surveys for Projects of other Departments.

### Progress Reports on Surveys

- The Official-in-charge will submit periodical reports of progress in prescribed forms as may be directed by the CSTE.
- At the conclusion of the Survey, a report should be formulated by the Official-in-charge of the Survey. The details of the information collected, calculations and diagrams, will be embodied in Tables as Annexures to the Report.
- The Survey Report and Annexures will be submitted to the Railway Board under a covering note, which will have the authority of the Railway Administration submitting the Report. It should provide a summing up and should contain clear recommendations together with the views of the FA&CAO.

## **Signalling Stores and their Accounting**

### **Classification of Stores**

- The Stores in the custody of the Signal Inspectors may be grouped under the following Stock Heads;
  - Imprest Stores
  - Tools and Plant
  - Protective Clothing
  - Books of Reference
  - Office furniture
  - Stationery and Forms
  - Stores obtained for specific works.

### **Imprest Stores**

- The materials classified as Imprest Stores, their procurement and accountal are contained in the Indian Railway Codes for Stores and Engineering Departments.
- Imprest Stores will be provided with each Supervisory Signal Inspector on a Division or such other Inspectors as may be nominated for the purpose. The nature of items of Imprest Stores, location and the scale of each imprest holder will be fixed by the CSTE or any lower authority authorized for the purpose. The quantity of each item of imprest stores which each imprest holder may hold at a time will be generally based on quarterly average consumption for normal maintenance and upkeep of equipment. Time for procurement in case of non-stock items and also time required for Stores Van movements in the case of stocked items may be taken into consideration for determining the quantity of imprest. The sanctioned scale will not be increased or decreased without prior approval of the sanctioning authority.

### **Tools and Plant**

- A scale of Tools and Plant will be fixed by the CSTE for each Inspector. This scale will include Tools for each Maintainer and artisan besides a small reserve with the Inspector.
- Instructions in regard to accountal of Tools and Plant are contained in the Indian Railway Code for the Engineering Department.

### **Protective Clothing**

- The Supervisory Signal Inspector Will submit to his DSTE the periodical requirements of protective clothing for all the staff eligible for the supply of the protective clothing in accordance with instructions issued from time to time.

- Guidelines in regard to preparation of indents and accounting of protective clothing are contained in the Indian Railways Signal Engineering Manual, Part-I.

- Accounts of the protective clothing will be maintained by the Supervisory Signal Inspectors on ledgers similar to the Tools and Plant ledgers.

### **Books of Reference**

- The Supervisory Signal Inspector will arrange to get copies of all Books of Reference for the use of his office , for himself and for the use of staff under him by submitting necessary indents to his DSTE.

- Accounts of Books of Reference will be maintained on ledgers similar to the Tools and Plants ledgers.

### **Office Furniture**

- The Supervisory Signal Inspector will maintain an account of all furniture in his charge on ledgers similar to the Tools and Plant ledgers.
- All replacements will be made on return of unserviceable articles. For any additional item, prior approval of the DSTE will be obtained before placing the indent.

### **Stationery and Forms**

- The Inspectors will submit their annual requirements of stationery to the DSTE in accordance with the scale for the supply of stationery.
- The DSTE will see that the sanctioned scale is not exceeded and the items for which no sanctioned scales have been fixed are essential and have necessarily to be supplied.
- A numerical accountal of receipt and issue of all items will be kept. The DSTE's office will make checks periodically to see that there is no accumulation of items of stationery and forms in the subordinate offices.

### **Stores obtained for works including Special Revenue Works**

- Materials for specific works will not ordinarily be requisitioned unless the estimate of the work has been sanctioned by the competent authority and funds have been allotted.
- Requisition for materials will show the name and particulars of the estimate and sanctioning authority for the work.
- Advance procurement of materials may be authorized by the CSTE or Dy. CSTE in charge of

works for long lead vital materials such relays, cables, signal machines, point machines, block instruments etc., which are required for the next three years, and which have to be specially arranged or have to be imported. In such cases, indents may be placed as soon as the Work appears in the Final Works Programme. These indents will be prepared on the basis of realistic estimate of quantities of materials and subject to prior scrutiny by the Finance Branch in respect of the reasonableness of the quantity of materials indented. The CSTE or Dy. CSTE will certify the quantity of the materials indented for each work. Indents will specify the delivery schedule for the next three years and funds will be arranged according to the delivery schedule.

- The materials on receipt will be either utilized on the work or if this is not immediately possible stored carefully.
- If the materials received are not used up immediately, will be kept at debit of a numerical account of 'Material-at-site' of the particular work. Detailed instructions in regard to maintenance of accounts for works estimated to cost less than Rs. 1 lakh and more than Rs. 1 lakh are contained in the Indian Railway Code for Engineering Department.

### **The Daily Transaction Register (DTR)**

- A Daily Transaction register will be maintained by each Inspector in the prescribed form.
- All receipts and issue of Stores pending their transfer to their appropriate Ledgers, will be entered in this Register.
- The Register will be written up daily. A line will be drawn across both pages under the last entry of each date to prevent subsequent entries being made.
- There will be no direct posting of materials in Ledgers from Challan. All transactions will first be shown in the DTR.
- The dates will be the same in both Ledger and the Register.
- The Inspectors are personally responsible for all the Stores in their custody and will satisfy themselves that the DTC and the Ledgers are being correctly posted. They will initial the DTC at least once a week in token of having verified the entries thereof.

### **Returned Stores**

- General instructions regarding returned stores are enumerated in the Indian Railway Code for the Stores Department.
- Spare and second hand materials sent to Stores Depot should be carefully loaded to avoid loss or breakage.
- Materials complete but pins badly worn and not sufficiently good to be considered second hand, will be entered up as unserviceable scrap and their approximate weight will be stated. If parts are missing, full details should be given.
- In the case of Signals, height, type and condition of post and fittings should be stated.
- All cast iron, steel, brass, zinc, copper and lead scrap should be collected from Sections regularly and sent to Stores Depot, with description and approximate weight.
- Empties such as tins, drums kegs, barrels and cement bags will be accounted for along with the materials contained in them and shown in the Returns. They will not be held longer than necessary and will be returned to Stores Depot for disposal.

### **Contracts and Tenders General**

- The procedure and rules for the calling of tenders and entering into contracts for execution of works and supply of materials are contained in the Indian Railway Code for Engineering Department and Indian Railway Code for Stores Department.

### **List of Approved Contractors and Registration of Applications**

- Lists of approved contractors will be maintained in the offices of the DSTE for their Divisions and the CSTE for the whole of the zonal Railway. As per Para, 1216E, these lists will be deemed to be confidential records and examined and revised periodically. They will be maintained in the manuscript form under the following categories of work:
  - For works to be executed under Open line conditions affecting safety of running trains—
    - Provision of Mechanical Signalling
    - Provision of Electrical signalling
    - Provision of Relay Interlocking, C.T.C. etc.
    - Laying of cables

- Erection of overhead alignment by the side of the track
- Any other signalling work
- For works to be executed under Open line conditions not involving safety of running train or on new lines or in areas away from track opened for traffic—
  - Provision of Mechanical Signalling
  - Provision of Electrical Signalling
  - Provision of Relay Interlocking, C.T.C. etc
  - Laying of cables
  - Erection of overhead alignment
  - Any other signalling work
  - Supply of sand, bricks, etc.
- The CSTE will authorize inclusion in the lists of approved contractors the names of applicants considered capable of executing works under one or more of the above categories. On receipt of an application from a contractor desirous of having his name included in the lists of approved contractors, the DSTE will satisfy himself on the following points and forward the application with his remarks to the CSWTE—
  - His position as an independent contractor
  - His capacity to undertake and carry out works satisfactorily, as vouched for by a responsible official or firm
  - His previous experience on works similar to that to be contracted for, in proof of which original certificates or testimonials may be called for and their genuineness verified, if need be, by reference to the signatories thereof.
  - His knowledge from actual personal investigation of the resources of the division in which he offers to work
  - His ability to supervise the work personally or by competent or duly authorised agents.

### **Basis for Inviting Tenders and Entering Into Contracts**

- The documents which form a contract are:
  - Instructions to parties tendering
  - Tender form, if any
  - Specifications—standard and special
  - Schedule of items and quantities, rates, etc.
  - Conditions of contract—standard and special

- Agreement form.
- The above items will be comprehensive and explicit so that there is the least possibility of conflicting, even differing, interpretations being placed on the intensions of the contract.
- Each DSTE will be in possession of copies of the above documents and acquaint himself with the provisions contained therein. Signal Inspectors may be supplied with the copies of these wherever necessary.
- Copies of these documents will be available in the office of CSTE and DSTE for sale to contractors.

### **Tenders Calling for Tenders**

- Tenders may be invited for any of the listed works required to be carried out under contract. When calling for tenders for works, the provisions contained in para 1211E, shall be observed. Tenders may be invited by the DSTE, Dy.CSTE, DRM or the CSTE depending on the contract value or works according to the procedure that may be prescribed by the Administration for the purpose. The common methods of obtaining tenders are by advertisement(Open Tenders), by direct invitation to a limited number of contractors(Limited Tenders) and in exceptional cases by invitation to one contractor(Single Tender).

### **Tender Notices**

- Notice for inviting tenders will be in the prescribed form and will embody the stipulations contained in para 1239-E.
- When limited tenders are invited, tender notices will be issued to contractors on the list of approved contractors and displayed on the notice boards of the offices of the DSTE and important stations on the Division concerned.
- When open tenders are invited, tender notices will be displayed on the notice boards of the offices of the DRM, Dy. CSTE, DSTE, Signal Inspectors and important stations on the region concerned. Tender notices may also be published in the newspapers on the approved list of the Government of India.

### **Tender Forms**

- Tender Forms will embody the contents of the contract document either directly or by reference. Tender forms will be issued on payment of the prescribed fees to the

appropriate contractors on the list of approved contractors. Contractors not on the approved list of approved contractors will, on payment of the prescribed fees be furnished with the tender forms and will be required to submit evidence regarding their financial status, previous experience and ability to execute the works and an authorized copy of the Income Tax Clearance Certificate without which their tenders will not be considered

### **Earnest Money and Security Deposit**

- The tenderer will be required to deposit with the tender, earnest money at the prescribed rate as initial security. In case of acceptance of the tender, the earnest money will be retained by the Railway as a part of the security for the due and faithful fulfilment of the contract, and the balance to make up the security deposit at the stipulated rates will be deposited by the contractor in cash or in the form of Government Securities or will be recovered by percentage deductions from the Contractor's "on account" bills. A guarantee from a Scheduled Commercial Bank in India may also be accepted as Security Deposit.
- No cheque will be accepted from a contractor or firm as earnest money with a tender unless it is guaranteed by the Bank concerned.
- The earnest money of all unsuccessful tenderers will be refunded as expeditiously as possible.

### **Tender Committees**

- The Administration will specify—
  - The constitution and functions of Tender Committees for the purpose of opening of tenders and submitting recommendations to the competent authority. The convenor of tender committee meeting will be the CSTE, DRM, Dy. CSTE, DSTE as the case may be. Wherever possible an Officer of the Accounts Department will be deputed on the tender committee.
  - The powers to be exercised by the CSTE, DRM, Dy.CSTE, DSTE respectively in the matters of acceptance of tenders and entering into contract documents.
  - The conditions in regard to acceptance of single tenders.

### **Opening of Tenders**

- At the advertised time and place tenders received for a contract will be opened by the Tender Committee and, where practicable, the names of tenderers and the rates tendered by them read out in the presence of such of the intending contractors or their agents as may attend . Each page and correction or stipulation (if any), of every tender will be initialed with date by members of the Tender Committee.

### **Acceptance of Tenders**

- Tenders opened and duly initialed at the Tender Committee Meeting will be valued in the office of the Chief Signal and Telecommunication Engineer (CSTE), Divisional Railway Manager (DRM), Deputy Chief Signal and Telecommunication Engineer (DCSTE) or the Divisional Signal and Telecommunication Engineer (DSTE), as the case may be and a comparative statement prepared. The comparative statement with a note will be sent to the Accounts Department for vetting. Based on the vetted comparative statement, the tenders will be adjudged by the Tender Committee and recommendations made to the authority empowered to accept the tender.
- Ordinarily the lowest tender should be accepted unless such acceptances would not be in the public interest. The acceptance or rejection of any tender is left entirely to the discretion of the authority empowered to deal with the matter and no explanation can be demanded by any tenderer as to the cause of rejection of his tender.

### **Entering into Contracts**

- No contract will be entered into unless authority exists for commencement of the work. No authority shall enter into a contract beyond its own powers of sanction.

### **Execution of Contract Documents**

- The tenderer whose tender is accepted will be required to appear at the office of the GM, CSTE, DRM or DSTE, as the case may be, in person or via a duly authorized representative, and execute the contract within 7 days after notice that the contract has been awarded to him. Failure to do so will constitute a breach of the agreement in which case the earnest money may be forfeited.
- In the event of any tenderer whose tender is accepted, refusing to execute the contract



documents, the authority may determine that such tenderer has abandoned the contract and thereupon his tender and the acceptance thereof will be null and void and earnest money forfeited.

### Form of Contract Documents

- Every contract will be complete in respect of the documents it constitutes.
- The contract agreement required to be executed by the successful tenderer will be in the prescribed form. The draft of the contract agreement will be vetted by the Accounts Department.

### Items of work not included in the Contract Documents

- The ASTE and the Inspector in charge of the work will ensure that no item of work that is not included in the contract is carried out without the sanction of the competent authority.
- Items of work not included in a contract may, if deemed expedient, be executed under the contract at the rates mutually agreed to by the contracting parties.

### Modifications to Contracts

- In the event of any of the provisions of the contract requiring to be modified after the contract documents have been signed, the modifications will be made in writing and signed by the Railway and the Contractor and no work will proceed under such modifications until this has been done. Any verbal or written arrangement abandoning modifying, extending, reducing or supplementing the contract or any of the terms thereof will be deemed conditional and will not be binding on the Railway unless and until the same is incorporated in a formal instrument signed by the Railway and the Contractor.

### Issue of Departmental materials to Contractors

- When so specified in the contract, cables and other signalling materials will be issued to contractor and receipts obtained for the same. It will be ensured that the contractor takes reasonable care of all materials made over to him and that on completion of the work the unused balance of the same are handed over by him in good order.

## Railway Electrification

- Railway Electrification made a modest beginning with the inauguration of first electric train between Bombay VT and Kurla Harbour on 3rd February 1925 on then existing GIP Railway system at 1500 V DC. Heavy gradients on the Western Ghats necessitated introduction of electric traction on Central Railway upto Igatpuri on North East line and Pune on South East line.

- 1500 Volt DC traction was introduced on suburban section of Western Railway between Colaba and Borivili on 05.01.1928 and Madras Beach and Tambaram of Southern Railway on 11.05.1931. This was primarily to meet the growing traffic in these metros. Thus, before the dawn of Independence, India had 388 KM of electrification on DC traction.

- In the post-Independence era, electrification of Howrah-Burdwan section of Eastern Railway was taken up on 3000 Volt DC during the First Five Year Plan period and completed in 1958. The first EMU services were inaugurated in Howrah-Sheoraphulli section by Pandit Jawahar Lal Nehru, first Prime Minister of India on 14.12.1957.

- 25 kV AC system of traction emerged as an economical system of electrification as a result of extensive research and trials. In 1957 Indian Railways decided to adopt 25 kV AC system of electrification as a standard, with SNCF as their consultant in the initial stages.

- The first section electrified on 25 kV AC system was Raj Kharswan-Dongoaposi of South Eastern Railway in the year 1960. With a view to provide continuity of traction system, Howrah-Burdwan section of Eastern Railway and Madras Beach Tambaram section of Southern Railway were converted to 25 kV AC system by 1968.

- The manufacture of Electric Multiple Units (EMUs) required for Kolkata suburban services was taken up indigenously at Integral Coach Factory (ICF), Chennai and first EMU rolled out during September 1962.

### Organisation and setup of Central Organisation for Railway Electrification (CORE)

- Railway Electrification (RE) office was initially set up in Calcutta as PORE (Project office for Railway Electrification) during the First Five Year Plan period, when Electrification of

Howrah-Burdwan section of Eastern Railway was taken up.

- A General Manager was posted for the Railway Electrification Organisation set up at Calcutta in 1959. In 1961, Northern Railway Electrification office was set up at Allahabad for electrification of Mughalsarai-New Delhi section. This office was headed by an Engineer -in- Chief.
- On recommendation of J. Raj Committee report in 1978, a number of Electrification works were included in the Pink Book (book containing works approved by the Parliament for execution). For proper controlling, monitoring and execution of Railway Electrification works in different Zonal Railways, the concept of Railway Electrification headquarter came into being.
- Since most of the sanctioned electrification works were falling in the Central and Southern regions of the country, the headquarter of Railway Electrification was set up at Nagpur and functioned under the charge of an Additional General Manager from 1982 to 1984. Railway Electrification office was shifted to Allahabad under Additional General Manager with effect from January 1985. A regular General Manager was posted at Central Organisation for Railway Electrification, Allahabad from July 1987 onwards which is continuing till date.
- The headquarters office of Central Organisation for Railway Electrification (CORE) is headed by General Manager and assisted by Electrical, S&T, Civil, Store, Personnel, Vigilance and associate Finance departments.
- Presently, nine RE project offices are functioning viz. Ambala, Bhubaneswar, Chennai, Lucknow, Jaipur, Secunderabad, Gorakhpur, Danapur, New Jalpaigudi and Jabalpur each headed by a Chief Project Manager.

### **Energy Conservation through Railway Electrification:**

- Railway transport is far more energy efficient as compared to road transport. Railways are; a) Six times more energy efficient as compared to road, b) Four times more economical in land use c) Six times more cost effective vis-à-vis road in construction costs for comparable levels of traffic. Among the modes of rail transport, electric traction is the most energy efficient. This can be seen in the light of the fact that every 100 route kilometers electrified section results in saving of annual

consumption of more than four million liters of diesel oil, which saves Rs. 2500 Crores worth foreign exchange annually.

### **Role of Electric Traction in Suburban Transport:**

- Electric Multiple Units (EMUs) are ideal for suburban services with higher acceleration and braking features required for frequent starts and stops. EMU services form the backbone of suburban transportation in the metropolitan cities of Mumbai, Kolkata and Chennai. In Mumbai area alone, about 1950 EMU trains are running daily on the suburban sections of Central and Western Railways which cater for about 5 million passengers every day. Electrification has made possible the introduction of EMU services in many suburban like main line sections. These services have become extremely popular.

### **Haulage of Heavier Freight Trains and Longer Passenger Trains under Electric Traction:**

- Electrification is making possible running of heavier freight trains. With the imported 6000 HP Thyristor locomotives, a consist of two of these locomotives, presently handles 4500 tonne trains in gradients upto 1 in 60 as against three numbers of 4000 HP earlier locomotives. Running of 9000 tonne trains is also possible with such locomotives, as has already been proved in tests conducted successfully in Ghaziabad - Mughal Sarai section.
- With the introduction of electrification, 21 passenger coaches are hauled by a single locomotive in most of the sections. A single electric locomotive is now hauling Prayagraj Express with 24 coaches between New Delhi and Allahabad. Introduction of Shatabdi Express services operating at 130 KMPH under electric traction have been achieved purely through indigenous efforts of Indian Railways.

### **Benefits of clearer environment:**

- One of the major advantages of electric traction is pollution free atmosphere not only to the travelers but also to the surrounding environment. Electric traction is proven to be less pollutant than the existing diesel mode and thus could be more eco-friendly to an area having delicate flora and fauna. Electric traction could reduce noise and air pollution and result in lesser disturbance to wild life habitat of the region.

## Technology Upgradation

- Introduction of Railway Electrification has caused major impetus to Technology upgradation on Indian Railways. Some of these are listed below:

a) Modernization of Equipment - With a view to bring down the maintenance cost and improve the reliability of power supply system, Railway Electrification has gone in for state-of-the-art technology as prevalent in the international arena viz., dry cast resin transformers, SF-6/Vacuum switch-gear, long creep age solid core insulators and PTFE neutral section. 8 wheeler self-propelled OHE inspection cars have also been introduced to improve maintenance. Action has also been initiated for procurement of OHE recording car for monitoring the performance of overhead equipment.

- Signalling and telecommunication systems are also upgraded by adopting state-of-the-art technology. Semaphore signalling system is being replaced by color light signalling system. Use of color light signals results in better visibility of signaling aspects to the loco pilots of running trains and this makes train running safer and operationally efficient. Inter-locking system is also being changed to panel or route relay interlocking. Besides speedier movement of traffic, these up-gradation measures contribute towards increase in safety.

- Underground cables are provided along with electrification, which results in more reliable and better quality of communication.

- **Supervisory Remote Control & Data Acquisition System (SCADA)**

- 220 / 132 / 25 kV power supply network for electrification extending along the track over a zone of about 200/300 km is centrally controlled from the division control center through remote control arrangements to ensure un-interrupted power supply to the track overhead equipment. In the present day electrification projects, state-of-the-art microprocessor based supervisory control and data acquisition system (SCADA) is being provided as against the earlier electro-mechanical strowger system of remote control equipment. The SCADA system has facilities for

tele-metering of voltage, current, maximum demand and power factor on a real time basis which enables control of maximum demand and thereby the charges thereof to be paid to the State Electricity Boards. In addition, this system provides for automatic trouble shooting and isolation of faulty section.

- **c) 2 x 25 kV System** - Indian Railways have introduced 2 x 25 KV Auto Transformer Feeding System of power supply on Bina-Katni-Anuppur-Bishrampur / Chirimiri coal route of Central Railway and South-Eastern Railway as distinct from the present conventional 25 kV AC system. With this system the advantage of high voltage transmission, i.e. 50 KV is realized permitting at the same time inter-running of standard 25 kV electric locomotives. This is achieved by an additional power conductor on top of the overhead equipment and the mast with 50 kV being obtained between the overhead equipment and the feeder. In addition, use of return conductor and booster transformers is eliminated completely.

- d) Electric Rolling Stock - As part of the modernization plan, Indian Railways had imported eighteen 18 6000 Horse Power Thyristor Locomotives, with transfer of technology. Indian Railways have developed chopper technology for DCEMUs in collaboration with Bhabha Atomic Research Center (BARC) and motor coaches with this technology have been inducted in service. The chopper technology, in addition to being less maintenance intensive is expected to save energy up to 30% to 34% in the sub-urban services.

## Chief Electrical Engineer (CEE)- Zonal Railway

- CEE is the Administrative Head of the Electrical Department, with overall responsibility for efficient working of the department. He is responsible to the General Manager in all matters pertaining to Electric Traction and Electrical General Services. On behalf of the General Manager, he directs and supervises all electrical works related to Railway, whether executed by Divisional Officer or by independent organisation. He oversees the budget of the Electrical Department and is also responsible for works to be executed by the department. CEE also functions as Electrical Inspector to the

Government as defined in Section 36(1) of Indian Electricity Act- 1910, in respect of all high voltage electrical installations and equipment owned by the Railways. This includes all high voltage electrical installations in the Railway including transmission lines, 25 kV feeder lines, sub-stations, switching stations which although running outside Railway premises, are, nevertheless, owned by the Railway. He is responsible for administration of the Electricity Rules in the Railway.

In regard to electric traction installations, in his capacity as Electrical Inspector, CEE is chiefly responsible for the following: -

- Scrutiny and approval of the layout and designs for sub-stations, OHE and other installations for compliance with the Indian Electricity Act and Rules;
- Inspection of the completed installations, either personally or by deputing his officers, for compliance with the safety requirements;
- Approval for the energization of the Installations;
- Statutory inspection of the installations periodically under Rule 46 of the Indian Electricity Rules;
- Investigation of electrical accidents and Issuing directives to prevent their recurrence; and
- Submission of annual report to Central Electricity Authority.

### Control Over Division

- In all technical matters, the Senior Divisional Electrical Engineers (Sr. DEEs) in the Division are answerable to CEE.

### Duties of Administrative Officers

- CEE is assisted by one or more officers of Senior Administrative rank, who will be responsible to CEE for the proper working of the department, the area of responsibility of each will be defined by CEE.
- Administrative Officers will :

a) Normally deal with all correspondence except those involving important policy matters and expression of opinion on behalf of the Railway on major matters of policy;

b) On behalf of CEE, exercise administrative and technical control for the efficient planning, design, construction, commissioning, safe and economic operation and effective periodic maintenance of electric traction services, Train Lighting, Air Conditioning on Coaches, General Power Services in Railway premises and equipment owned by the Railway and to achieve this, carry out purposeful periodic inspection of installations;

c) In the event of major breakdowns/accidents, take prompt and energetic action to restore normal services at the earliest possible time and subsequently take follow-up action to investigate the cause of failure and initiate measures to prevent recurrence;

d) Co-ordinate effectively with Administrative Officers of operating and other departments on the Railway and also their counterparts in other Railways in regard to items of common interest;

e) Maintain liaison with the Power-Supply Authorities at Headquarters level In regard to continuity of supply, tariff and policy matters;

f) Keep a close watch over the day-to-day performance of traction services and tighten up preventive maintenance where required;

g) Investigate equipment failures, particularly of recurring nature, initiate appropriate remedial steps to modify the design wherever required In consultation with the Research, Designs and Standards Organisation (RDSO), Locomotive manufacturers; also take follow-up action to ensure prompt completion of modifications ordered on all equipment held by the Railway;

h) Plan and review the organizational set-up required for satisfactory maintenance and operation of the electric traction services;

i) Plan the recruitment and training of staff for maintenance and operation;

j) Exercise effective technical scrutiny over items for inclusion in the M&P, Works and Rolling Stock Programmes and progress items approved in the programmes;

k) Plan in advance the procurement of vital stores required for maintenance and operation of electric traction services and maintain effective liaison with the Stores Department at Headquarters level for prompt procurement and adequate stocking of such stores;

l) Arrange for standardization of stores as required and preparation of drawings and specifications to facilitate procurement;

m) Study and analyze the periodic statistical returns on electric traction and initiate appropriate remedial measures as required to improve efficiency;

n) Monitor energy consumption, power factor and Maximum Demand at various traction sub-stations

on the Railway and initiate appropriate measures to ensure efficient utilization of energy and to contain the energy bill;

o) Ensure the prompt submission of periodical returns to the Railway Board and RDSO;

p) Budgeting and control over expenditure, particularly in regard to repair costs, energy bills and maximum demand charges;

q) Carry out studies regarding the feasibility and economics of electrification of additional sections In consultation with the Operating and Accounts Departments and submission of proposals to the Board where found justifiable;

r) Keep in touch with modern technical developments with a view to identify applicability in railway installations to reduce operation and maintenance cost;

s) Maintain liaison with the Railways for quick return of overdue locomotives;

t) Maintain close co-ordination with production units and POH workshops for supply of shop manufactured items, reducing POH time and improving reliability.

### Stores Procurement

- An important responsibility on the Headquarters and Divisional Offices is to ensure by timely action that sufficient stocks of stores and spares are actually held not only for meeting the day-to-day needs of maintenance and repair, but also for any emergency such as thefts of overhead conductors, uprooting of OHE masts on account of accidents, or to meet urgent operational requirements such as wiring of additional lines in a yard.

- Number of component parts involved in rolling stock and OHE maintenance is quite large and each of them should comply with rigid specifications, being of special nature. Reliable sources of supply are also limited. Taking all these factors into account, it is essential to take advance action to make a realistic assessment of the requirements for the whole Railway and take timely procurement action through the Stores Department.

- Machinery should exist on each Railway to review periodically the supply position jointly with the Stores Department so that prompt corrective action may be taken for items which are likely to be in short supply.

- Consolidation and scrutiny of requirements for the whole Railway, follow-up action in regard to the release of foreign exchange for imported items and correspondence with the Railway Board as well as with procurement agencies is the responsibility of the Headquarters Office.

### Standard Drawings and Specifications

- Indian Railway Standard (IRS) drawings and specifications for electric traction spare parts and stores required will be issued by Chief Electrical Engineer.
- Drawings and specifications to be issued will keep in view the drawings and standards issued by RDSO and manufacturers and experience of Railways etc.

## **DIVISIONAL ORGANIZATION**

### **Divisional Railway Manager (DRM)**

For administrative purposes, the DRM functions under direct control of the General Manager but is responsible to CEE for efficient functioning of electric traction and electrical general services under his direct administrative control.

### **Duties of Traction Distribution (TrD) Officers**

#### **1. Duties of Senior Divisional Electrical Engineer (TrD)**

Sr. DEE/DEE(TrD) is the officer in immediate charge of the Traction Distribution section in a

Division, responsible for all technical and organizational matters connected with the efficient maintenance and operation of the power supply installations, OHE and RC equipment. He should be intimately acquainted with the technical details, performance rating and operating and maintenance problems of the installations under his charge. His chief duties will be as under :-

- a) General planning and supervision to ensure efficient and safe maintenance and operation of the installations under his charge in accordance with prescribed schedules and regulations;
- b) Study of the day-to-day technical and organizational problems of operation and maintenance and initiation of appropriate measures to deal with these;
- c) Man-power planning for effective maintenance at minimum cost;

d) Careful statistical analysis and compilation of details of all defects and failures occurring and initiation of appropriate remedial steps if these are attributable to inadequate or improper operation or maintenance or mismanagement by staff. Where defects are attributable to improper design or manufacture, or where modifications or proposed remedial measures require CEE's approval, prompt submission of detailed analysis together with recommendations, seeking such approval;

e) Watch on the progress and completion of all approved modifications as well as the efficacy of such modifications;

f) Watch on the availability of spare parts and stores required for maintenance and initiation of stores action well in advance for procurement of items involving prolonged delivery and effective follow-up action to ensure timely procurement. Also watch the behaviour of equipment to assess their anticipated life and timely programming of replacements;

g) Overall co-ordination at the divisional level with the operating and other departments to plan power blocks required for maintenance of OHE and careful planning of maintenance work to make the best use of such blocks;

h) Inspection of his jurisdiction as under-

1. Detailed visual inspection of the OHE by push trolley, motor trolley or OHE Inspection Car as often as possible;

2. Detailed inspection of traction sub-stations, switching stations and other power supply and RC installations, in particular protective gear, once in six months,

3. Frequent surprise checks of maintenance gangs at works including gangs working at night. At least one night inspection and one day inspection will be carried out by him;

4. General inspection of all subordinate offices under him once a year, including test check of stores and tools and plant items;

5. At least one current collection test in a year throughout his jurisdiction on main lines;

i) Liaison with power supply authorities in regard to important matters that cannot be dealt with at lower levels;

j) Preparation of plans and estimates for works involving the traction distribution system and scrutiny of plans and estimates for works of other departments affecting the traction distribution system. For minor works such as small changes in the layout of lines in yards or alignments, provision of OHE for one or two additional loops, cross-overs etc. designs will be worked out at the divisional level in accordance with approved standards and approval of CEE obtained before the works are executed. Designs for major works will however, be worked out in CEE's office;

k) Arrange adequate training of staff under him in the correct methods of maintenance and operation;

l) Careful preparation of the budget for traction distribution section and control over expenditure for operation and maintenance. In addition to scrutiny and passing of power supply bills, study of the energy consumption and maximum demand figures and liaison with the operating department and

Rolling Stock section to keep expenditure for these under effective control;

m) Special watch on the adequacy and alertness of the organization for dealing with failures and break-downs, personal supervision of operations in the event of major failures affecting train services or involving outage of essential equipment, so as to effect quick restoration ;

n) Close association with tests and trials in the area under his jurisdiction and submission of prescribed reports;

o) Ensuring by periodical and surprise inspections that rules and procedures laid down in the General and Subsidiary Rules, Manual of AC Traction, department codes and orders and circulars issued from time to time are being complied with by all staff under him and that they are performing their allotted duties efficiently.

### **Budget Estimates for Electric Traction**

The following special points shall be kept in mind when preparing the Budget estimate for electric traction:-

a) Energy consumption and maximum demand for goods and passenger services should be estimated based on an assessment of traffic expected during the next financial year obtained from the Operating Department. This is particularly important for sections where electric traction is likely to be introduced for the first time during the new year. Based on this, necessary provision should be made for energy Consumption and other charges. The additional energy consumption may be computed on the basis of the specific energy consumption actually obtained for different services on the Railway during the previous six months. Where maximum demand payment is involved, the additional maximum demand for budgeting purposes may be assumed to be in proportion to the anticipated additional energy consumption if the pattern of train working remains unchanged. If there is material change in the pattern of train working, detailed calculation of maximum demand will have to be made from the proposed Graphic Train Charts for the period of the day when the traffic is heaviest;

- b) Anticipated changes in tariff and possibility of application of such changes with retrospective effect;
- c) Assessment of additional requirements of operating staff based on the traffic expected;
- d) Provision for training of additional staff based on anticipated expansion of services;
- e) Careful assessment of the cost of special procurement of stores for normal maintenance and heavy repairs;
- f) Provision for clearing backlog of repairs, if any.

### **Electrical Department -- Budget Demands**

The demands and the main heads pertaining to the Electrical Department are as under -

Demand No. 3 -- General Superintendence and Services of Railways Main Head 700 – Electrical Management

Demand No. 5 -- Repairs and Maintenance of Motive Power Main Head 500 – Electric Locomotives

Demand No. 6 -- Repairs and Maintenance of Carriages and Wagons Main Head 400 – Electrical Multiple Units

Coaches Main Head 500 – TL, Fans & AC on Coaches.

Demand No. 7 -- Repairs and Maintenance of Plant and Equipment Main Head 400 – Plant and Equipment – Electrical

Demand No. 8 -- Operating Expenses – Rolling Stock and Equipment Main Head 300 – Electrical Locomotive Main Head 400- Electrical Multiple Units


Demand No. 10 -- Operating Expenses – Fuel Main Head 300 – Electric Traction.



Slide 1

**Session 9**

**Safety Aspects and Signalling Systems  
in the Indian Railways**



Slide 4

**Basic Concepts**

**Introduction**

- ✓ The main objectives of modernization of the S&T system of the Railways is to-
  - improve safety by providing modern safety devices such as track circuiting and auxiliary warning system,
  - provide cost effective solutions to increase line capacity by introducing systems such as Centralised Traffic Control and Automatic Bloc Signalling and
  - achieve operational efficiency through modern signalling systems and modern telecommunications.

Training Module on Audit of Railways; Session:9 4

Slide 2

**Learning Objective**

- ✓ In this session, the participants will be able to understand the basic concepts of the Signalling Systems of the Indian Railway including safety aspects and maintenance of accounting of signalling stores and tenders which will help them to focus on audit issues in the practical work context.

Training Module on Audit of Railways; Session:9 2

Slide 5

**Organisational Set-up**

- ✓ S&T Directorates function under Additional Member (Signal) and Additional Member (Telecommunication) who are responsible for taking policy decisions on S&T matters.
- ✓ At the Zonal level, the signalling department is under the control of a Chief Signal & Telecommunication Engineer who reports to the General Manager of the Zone.

Training Module on Audit of Railways; Session:9 5

Slide 3

**Basic Concepts**

**Introduction**

- ✓ Signal and Telecommunication System (S&T) plays a vital role in Railway Operations.
- ✓ S&T provides the critical core in this mammoth railway operation system. It makes safe railway operations possible.
- ✓ To cope with the increasing freight and passenger traffic needs and to ensure adequate safety standards, it is necessary for the Indian Railways to steadily modernize its S&T system.

Training Module on Audit of Railways; Session:9 3

Slide 6

**Organisational Set-up Contd.**

- ✓ The major construction activities of the Railways may be done under the administrative control of a Chief Signal & Telecommunication Engineer (Construction).
- ✓ Chief Signal & Telecommunication Engineer is the administrative and professional head of the Signal & Telecommunication Department and is responsible to the GM for the efficient and economical working of the department.

Training Module on Audit of Railways; Session:9 6

Slide 7

**Organisational Set-up Contd.**

- ✓ Chief Signal & Telecommunication Engineer (CSTE) may be assisted in his work by one or more Chief Signal Engineers (CSE) or Chief Telecommunication Engineer (CTE).
- ✓ CSE and CTE hold independent charge of their respective areas of control.
- ✓ CSTE, CSE and CTE are assisted by a team of officers such as Deputy CSTE, Sr. STE and ATE.

Training Module on Audit of Railways; Session:9 7

Slide 10

**System of Train Working**

- ✓ The types of systems for train working in the Indian railways are:
  - Token/Tokenless Instruments,
  - One Train Only System,
  - Intermediate Block Signalling and
  - Automatic Block Signalling.
- ✓ Out of these systems Automatic Block Signaling (ABS) is the most modern system.
- ✓ In this system, signals are cleared automatically for the passage of a train after maintaining a specified distance behind preceding train.

Training Module on Audit of Railways; Session:9 10

Slide 8

**Organisational Set-up Contd.**

- ✓ The CSTE (Construction)
  - provides necessary direction and control for the efficient and economical execution of all works under his charge;
  - maintains liaison with the Open Line Organisation and follows the general policies and procedures laid down for the execution of works.
- ✓ CSTE (Con) also exercises necessary budgetary controls within the allotment of funds at his disposal.

Training Module on Audit of Railways; Session:9 8

Slide 11

**Augmentation of Line Capacity through ABS System**

- ✓ Computer aided Centralised Traffic Controls have increased line capacity to about 35/40 trains each way compared to Tokenless Block Working system.
- ✓ The latest ABS System increased sectional capacity to 100 trains each way on a double line section from 65 trains in the Intermediate Block Signalling System.

Training Module on Audit of Railways; Session:9 11

Slide 9

**Operation of Points and Signals**

- ✓ With the use of Panel Interlocking (PI), Route Relay Interlocking (RRI), Solid State Interlocking (SSI), etc., there is no limit on the distance upto which points and signals could be operated from a centralized location.
- ✓ SSI is the most modern interlocking system. It is a micro processor based interlocking and provides better reliability and consumes less power than PI/RRI.

Training Module on Audit of Railways; Session:9 9

Slide 12

**Signalling Indicators**

- ✓ The following types of Signal Indicators are presently in use on the Indian railways:
  - 2 - aspect lower quadrant signaling (LQ)
  - Multi-aspect upper quadrant signaling (MAUQ)
  - Multi-aspect colour light signaling (MACL)
- ✓ MACL is the most reliable type of signalling in use on Indian Railways which also requires less maintenance.

Training Module on Audit of Railways; Session:9 12

Slide 13

**Axle Counters**

- ✓ Axle Counters are electronic devices employed for detecting presence of a vehicle on a defined length of a railway track.
- ✓ This can also be used as a substitute for conventional track circuiting even in locations where steel sleepers are used.

Training Module on Audit of Railways; Session:9 13

Slide 16

**Duties of Chief Signal Inspectors (CSI) and Signal Inspectors (SI)**

- ✓ Exercising supervision over the work done by the S&T Inspectors and maintenance staff;
- ✓ Testing, overhauling and carrying out alterations to the existing S&T installations;
- ✓ Carrying out inspections as per approved schedule; and

Training Module on Audit of Railways; Session:9 16

Slide 14

**Telecommunication System**

- ✓ Created in Railways to serve two main purposes-
  - Operational requirements which includes requirements such as control, block, traction power, traction loco, emergency for controlling and monitoring day-to-day train movements and
  - administrative requirements such as control, coordination and collecting data from stations, marshalling yards, interchange points etc., which interconnect Zonal and Divisional Headquarters.

Training Module on Audit of Railways; Session:9 14

Slide 17

**Budget Estimates, Expenditure, Budgetary Control and Completion Reports**

Budget Terms

- ✓ Budget Estimate: The S&T department of a Zonal Railway has to prepare estimates of expenditure expected to be incurred in a year and submit them on prescribed dates to the Railway Board for obtaining sanction of the Parliament or the President.
- ✓ Such estimates are called Budget Estimates.

Training Module on Audit of Railways; Session:9 17

Slide 15

**Duties of S&T Engineers**

- Installation and maintenance of all S&T equipment;
- Observance of the extant rules and procedures and orders and circulars issued from time to time;
- Preparation of plans and estimates and safe execution of works;
- Coordination with Engineering and other branches in case of combined works;
- Undertaking periodical inspections;
- Periodical verification of the materials at site;
- Obtaining sanction of Commissioner of Railway Safety for new signalling works or alterations and additions;
- Control over expenditure in relation to budget allotments and sanctioned estimates;
- Submission of proposals for Revenue and Works Budget alongwith periodic reviews;

Training Module on Audit of Railways; Session:9 15

Slide 18

**Budget Estimates, Expenditure, Budgetary Control and Completion Reports** Contd.

- ✓ Demands for Grants: The Railway Board prepares the 'Demand for Grants' for the zonal Railways on the basis of the Budget Estimates received from them and present them to the Parliament or the President for sanction;
- ✓ Grants and Appropriation: The final approved 'Demands for Grants' by the Parliament are called Budget Grants and those sanctioned by the President are called 'Appropriations';

Training Module on Audit of Railways; Session:9 18

Slide 19

**Budget Estimates, Expenditure, Budgetary Control and Completion Reports** Contd.

- ✓ Budget Orders and Allotments: The 'Budget Orders' through which the Railway Grants and Appropriation for a year are distributed to the Zonal Railways are accompanied with the following Documents-
  - Demands for Grants;
  - Explanatory Memorandum showing the financial results of the year;
  - Works, Machinery and Rolling Stock Programme;

Training Module on Audit of Railways; Session:9 19

Slide 22

**Budgetary Control over Expenditure**

- ✓ Sr. DSTE/DSTE shall ensure that the amounts involved in passing requisitions for materials and tolls for maintenance works are within the allotments and the sanctioned estimates;
- ✓ Before execution of agreements and work orders with contractors the Sr. DSTE/DSTE shall carefully check them in every respect;

Training Module on Audit of Railways; Session:9 22

Slide 20

**Revenue and Works Budget**

Budget estimates of the S&T department comprise mainly of the followings:

- ✓ Estimates of Working Expenses based on the expenses for the repairs and maintenance of signalling, interlocking and telecommunication services;
- ✓ Works Budget: 'Open Line Works Budget' otherwise known as 'Annual Works Programme';
- ✓ Plant and Machinery Programme comprises estimates for requirement of Machinery and Plant.

Training Module on Audit of Railways; Session:9 20

Slide 23

**Planning, Estimating and Survey**

- ✓ Planning-
  - The process of programming Works, preparing necessary justification and estimates, making available funds for their execution within the ceilings prescribed and including them in the "Works, Machinery and Rolling Stock Programme" is termed planning.
- ✓ Initiation of Works Programme-
  - Programming of S&T Works may be initiated as a result of proposals made by the Signal, Operating or other Departments for periodic replacement of worn out assets or for meeting operational requirements or for improving the safety of train operation or for provision of amenities to passengers,

Training Module on Audit of Railways; Session:9 23

Slide 21

**Maintenance of Accounts**

- ✓ The expenditure incurred is brought to account through various vouchers.
- ✓ Subject to powers delegated to him, the Sr. DSTE/DSTE may incur expenditure on all ordinary maintenance work and establishment.
- ✓ All vouchers, such as Debit Note for stores supplied, freight bills shall be carefully scrutinised before acceptance.
- ✓ Wherever necessary, such debits shall be co-related and checked with the indents and work orders in workshops and necessary endorsements made thereon.

Training Module on Audit of Railways; Session:9 21

Slide 24

**Planning, Estimating and Survey** Contd.


- ✓ Where there is sufficient justification, the proposal after approval by the Divisional Railway Manager shall be forwarded to the Headquarters office along with the remarks by the Accounts Branch for scrutiny and examination by the Heads of Departments concerned.
- ✓ Works initiated by the Headquarters Office shall be sent to the FA&CAO for obtaining concurrence and thereafter included in the Works Programme.

Training Module on Audit of Railways; Session:9 24

Slide 25

**Planning, Estimating and Survey Contd.**

- ✓ General instructions applicable to estimates- While preparing the detailed estimates the following guidelines should be observed:
  - Details of cost of cabin, staff quarters and other buildings and electric power connections are to be included;
  - Establishment and Supervision charges, are to be included;
  - Provision is to be made for additional stores / office accommodation where necessary.

Training Module on Audit of Railways; Session:9  25

Slide 28

**Planning, Estimating and Survey Contd.**


- ✓ Surveys- Field surveys will be carried out for the following categories of S&T works costing more than Rupees Fifty Lakhs before inclusion in the Works Programme.
  - Relay Interlocking of Major yards;
  - Mechanization of Marshalling Yards;
  - Microwave and other multi-channel Communication Systems;
  - Extensive Integrated Telephone networks;
  - Sophisticated signalling scheme including Auxiliary Warning System, Centralized Traffic Control etc.

Training Module on Audit of Railways; Session:9 28

Slide 26

**Planning, Estimating and Survey Contd.**

- ✓ Where works are customarily executed through the agency of contractors, each Divisional Office will maintain the Schedule of Rates issued under the authority of CSTE / CSTE(CON).
- ✓ The Schedule of Rates may be reviewed and revised by CSTE / CSTE(CON) every five years or at shorter intervals as considered necessary.

Training Module on Audit of Railways; Session:9  26

Slide 29

**Planning, Estimating and Survey Contd.**

- ✓ Expenditure on Surveys- The proposal for Surveys will be submitted to the Railway Board well in advance to enable necessary provision being made in the Budget.
- ✓ The Budget allotment for preliminary Survey of a work will be charged under the prescribed Demand and when final estimate for that particular work is sanctioned, the amount charged under the above Demand will be transferred to the sanctioned estimate of the Project.

Training Module on Audit of Railways; Session:9 29

Slide 27

**Planning, Estimating and Survey Contd.**

- ✓ No variation in the Schedule of Rates is permissible without the specific authority of CSTE / CSTE(CON).
- ✓ The Divisional S&T Engineer will be in possession of copies of the authorized Schedule of Rates and Price Lists of Stores and amendments advised to him from time to time.

Training Module on Audit of Railways; Session:9 27

Slide 30

**Planning, Estimating and Survey Contd.**

- ✓ Imprest Amount- Official-in-charge of the Survey will be provided with an adequate Imprest.
- ✓ Progress Reports on Surveys- At the conclusion of the Survey the Official-in-charge formulated a report containing the details of the information collected, calculations and diagrams.
- ✓ The Survey Report, which should contain clear recommendations together with the views of the FA&CAO, and Annexure will be submitted to the Railway Board.

Training Module on Audit of Railways; Session:9 30

Slide 31

**Signalling Stores and their Accountal**

- ✓ The Stores in the custody of the Signal Inspectors may be grouped as-
  - Imprest Stores
  - Tools and Plant
  - Protective Clothing
  - Books of Reference
  - Office furniture
  - Stationery and Forms
  - Stores obtained for specific works.

Training Module on Audit of Railways; Session:9 31

Slide 34

**Signalling Stores and their Accountal** Contd.

- ✓ Books of Reference- The Supervisory Signal Inspector will arrange to get copies of all Books of Reference for the use of his office, by submitting necessary indents to his DSTE.
- ✓ Office Furniture- The Supervisory Signal Inspector will maintain an account of all furniture in his charge.
- ✓ For addition of any, item prior approval of the DSTE will be obtained before placing the indent.

Training Module on Audit of Railways; Session:9 34

Slide 32

**Signalling Stores and their Accountal** Contd.

- ✓ Imprest stores- Imprest Stores will be provided with each Supervisory Signal Inspector on a Division or such other Inspectors as may be nominated for the purpose.
- ✓ The quantity of each item of Imprest Stores which each imprest holder may hold at a time will be generally based on quarterly average consumption for normal maintenance and upkeep of equipment.

Training Module on Audit of Railways; Session:9 32

Slide 35

**Signalling Stores and their Accountal** Contd.

- ✓ Stores obtained for works including Special Revenue Works- Materials for specific works will not ordinarily be requisitioned unless the estimate of the work has been sanctioned by the competent authority and funds have been allotted.
- ✓ The CSTE or Dy. CSTE will certify the quantity of the materials indented for each work.
- ✓ If materials received are not used up immediately, these will be kept at debit of a numerical account of 'Material-at-site' of the particular work.

Training Module on Audit of Railways; Session:9 35

Slide 33

**Signalling Stores and their Accountal** Contd.

- ✓ Tools and Plant- A scale of Tools and Plant will be fixed by the CSTE for each Inspector. This scale will include Tools for each Maintainer and Artisan besides a small reserve with the Inspector.
- ✓ Protective Clothing - The Supervisory Signal Inspector Will submit to his DSTE the periodical requirements of protective clothing for all the staff eligible for the supply of the protective clothing.
- ✓ Accounts of the protective clothing will be maintained by the Supervisory Signal Inspectors on ledgers similar to the Tools and Plant ledgers.

Training Module on Audit of Railways; Session:9 33

Slide 36

**The Daily Transaction Register (DTR)**

- ✓ A Daily Transaction Register will be maintained by each Inspector in the prescribed form.
- ✓ All receipts and issue of Stores pending their transfer to their appropriate Ledgers, will be entered in this Register daily.
- ✓ The Inspectors are personally responsible for all the Stores in their custody and will satisfy themselves that the DTR and the Ledgers are being correctly posted. They will initial the DTR at least once a week in token of having verified the entries thereof.

Training Module on Audit of Railways; Session:9 36

Slide 37

**Returned Stores**

- ✓ Spare and second hand materials sent to Stores Depot should be carefully loaded to avoid loss or breakage.
- ✓ In the case of Signals, height, type and condition of post and fittings should be stated.
- ✓ All cast iron, steel, brass, zinc, copper and lead scrap should be collected from Sections regularly and sent to Stores Depot, with description and approximate weight.

Training Module on Audit of Railways; Session:9 37

Slide 40

**Contracts and Tenders - Tender Notices**

- ✓ Notice for Inviting Tenders will be in the prescribed form.
- ✓ In the case of limited tenders notices will be displayed on the notice boards of the offices of the DSTE and important stations on the Division concerned.
- ✓ In the case of open tenders notices will be displayed on the notice boards of the offices of the DRM, Dy. CSTE, DSTE, Signal Inspectors and important stations in the region concerned.
- ✓ Tender notices may also be published in the newspapers on the approved list of the Government of India.

Training Module on Audit of Railways; Session:9 40

Slide 38

**Contracts and Tenders - Basic Documents**

- ✓ Instructions to parties tendering
- ✓ Tender form, if any
- ✓ Specifications—Standard and Special
- ✓ Schedule of Items and Quantities, Rates, etc.
- ✓ Conditions of Contract—Standard and Special
- ✓ Agreement Form.

Training Module on Audit of Railways; Session:9 38

Slide 41

**Contracts and Tenders - Tender Forms**

- ✓ Tender forms will be issued on payment of the prescribed fees to the appropriate contractors on the approved list.
- ✓ Contractors not on the approved list will, on payment of the prescribed fees be furnished with the tender forms and will be required to submit evidence regarding their financial status, previous experience and ability to execute the works and an authorized copy of the Income Tax Clearance Certificate without which their tenders will not be considered

Training Module on Audit of Railways; Session:9 41

Slide 39

**Contracts and Tenders - Calling for Tenders**

- ✓ Tenders may be invited by the DSTE, Dy.CSTE, DRM or the CSTE depending on the contract value or works according to the procedure that may be prescribed by the Administration for the purpose.
- ✓ The common methods of obtaining tenders are
  - advertisement (Open Tenders),
  - direct invitation to a limited number of contractors (Limited Tenders) and
  - invitation to one contractor (Single Tender) in exceptional cases.

Training Module on Audit of Railways; Session:9 39

Slide 42

**Contracts and Tenders - Earnest Money and Security Deposit**

- ✓ Tenderer will be required to deposit with the tender, earnest money at the prescribed rate as initial security.
- ✓ In case of acceptance of the tender, the earnest money will be retained by the Railway as a part of the security for the due and faithful fulfillment of the contract.
- ✓ No cheque will be accepted from a contractor/firm as earnest money unless it is guaranteed by the Bank concerned.
- ✓ Earnest money of all unsuccessful tenderers will be refunded as expeditiously as possible.

Training Module on Audit of Railways; Session:9 42

Slide 43

Contracts and Tenders - Opening of Tenders

- ✓ At the advertised time and place, tenders received for a contract will be opened by the Tender Committee and, where practicable, the names of tenderers and the rates tendered by them read out in the presence of such of the intending contractors or their agents as may attend.
- ✓ Each page and correction or stipulation (if any), of every tender will be initialed with date by members of the Tender Committee.

Training Module on Audit of Railways; Session:9 43

Slide 46

Contracts and Tenders - Form of Contract Documents

- ✓ Every contract will be complete in respect of the documents it constitutes.
- ✓ The contract agreement required to be executed by the successful tenderer will be in the prescribed form.
- ✓ The draft of the contract agreement will be vetted by the Accounts Department.

Training Module on Audit of Railways; Session:9 46

Slide 44

Contracts and Tenders - Acceptance of Tenders

- ✓ Ordinarily the lowest tender should be accepted unless such acceptances would not be in the public interest.
- ✓ The acceptance or rejection of any tender is left entirely to the discretion of the authority empowered to deal with the matter and no explanation can be demanded by any tenderer as to the cause of rejection of his tender.

Training Module on Audit of Railways; Session:9 44

Slide 47

Contracts and Tenders - Items of work not included in the Contract Documents

- ✓ The ASTE and the Inspector in charge of the work will ensure that no item of work that is not included in the contract is carried out without the sanction of the competent authority.
- ✓ Items of work not included in a contract may, if deemed expedient, be executed under the contract at the rates mutually agreed to by the contracting parties.

Training Module on Audit of Railways; Session:9 47

Slide 45

Contracts and Tenders - Entering into Contracts

- ✓ No contract will be entered into unless authority exists for commencement of the work.
- ✓ No authority shall enter into a contract beyond its own powers of sanction.

Training Module on Audit of Railways; Session:9 45

Slide 48

Contracts and Tenders - Modifications to Contracts

- ✓ In the event of any of the provisions of the contract requiring to be modified after the contract documents have been signed, the modifications will be made in writing and signed by the Railway and the Contractor; and no work will proceed under such modifications until this has been done.
- ✓ Any verbal or written arrangement abandoning modifying, extending, reducing or supplementing the contract or any of the terms thereof will be deemed conditional and will not be binding on the Railway unless and until the same is incorporated in a formal instrument signed by the Railway and the Contractor.

Training Module on Audit of Railways; Session:9 48



# Session: 10

## IT Audit

## Session 10: Instructor's Guide

<b>Session Title: IT Audit .</b>		Session Guide
<b>Instructor's Guide</b>	Reference	Participants' Response
<b>Session Overview</b>		
<b>Welcome</b> participants to the session and remind them that their active participation is critical for the success of each session.	Lecture	
<b>Learning Objective</b>		
<b>Inform:</b> Given the inputs of IT Audit of Railways through group discussion, lecture and PowerPoint slide show, the participants will at the end of the session acquire basic concepts of IT Audit which will help them to focus on audit issues in the actual work context.	Lecture	
<b>Basic Concepts</b>		
<b>Discuss:</b> <ul style="list-style-type: none"> <li>● Need for Information Systems and IT Audit.</li> <li>● Processes of IT Audit.</li> <li>● Discuss on the given example of IT Review.</li> </ul>	Lecture with PowerPoint Slide show <b>Session 10 IT Audit</b>	
<b>Application:</b>		
<ul style="list-style-type: none"> <li>● Distribute Illustration I</li> <li>● Allow learner sub-groups to discuss Illustration I and write out views on Audit Objectives, Audit scope and methodology and Key Audit observations.</li> <li>● Allow each spokes-person from learner sub-groups to put forward group views.</li> <li>● Conduct an interactive session comparing group responses.</li> <li>● Distribute Illustration II and follow same steps as in case of Illustration I.</li> </ul>	Session 10 Illustration I and II	
<p><b>Distribute</b> Participants' Note.</p> <p><b>Tell</b> the participants that during the session, we discussed need for Information Systems Audit and IT Audit and their processes. We also discussed two Illustrations with Group Discussion.</p> <p><b>Invite</b> questions on themes discussed. If participants have any doubts/clarifications about themes, clarify the same. Answer participants queries.</p> <p><b>Thank</b> the participants and bring the session to a close.</p>	Participants' Note Session 10	

**Training Method:** Interactive Lecture, Power Point Slide Show and Group Discussion. For this purpose, divide entire training population into 4(four) sub-groups. Each group will have its own spokes-person to put forward reply to other sub-groups.

**Materials Required:** Power Point Slides, Projector, White Board, Marker Pen, Pens, Writing paper and Participants' Note

## Session Title: IT Audit

### Session Overview:

- The concept of IT auditing was formed in the mid-1960's and has gone through numerous changes due to advances in technology and the incorporation of technology into business.
- An **Information Technology (IT) audit** or **Information Systems (IS) audit** is an examination of the controls within an entity's Information technology infrastructure.
- These reviews may be performed in conjunction with a financial statement audit, internal audit, or other form of attestation engagement.
- Formerly called an Electronic Data Processing (EDP) audit, an IT audit is the process of collecting and evaluating evidence of an organisation's information systems, practices, and operations.
- Obtained evidence evaluation can ensure whether the organisation's information systems safeguard assets, maintain data integrity, achieve organisational objectives effectively, acquire resources economically and consume resources efficiently.
- Safeguarding of assets means assets are protected from damage or destruction, unauthorised use, unauthorised removal etc.
- Maintaining data integrity ensures that the data is authorised, accurate, complete, non-redundant, timely and private. Achieving organisational objectives effectively means Information System are developed, implemented, operated and maintained to meet the requirement of the major stakeholders.
- Acquiring resources economically ensures that the resources are acquired by availing of competitive prices without compromising the interest of the Information System and there is no avoidable or excess acquisition of resources.
- Efficient consumption of resources ensures that Information Systems are designed and tuned to minimise the resources they use.

### Need for Information System Audit:

There are mainly seven factors influencing an organisation towards control and audit of Information Systems:

- **Organisational cost of data loss:** Computers are used extensively to process data to information for decision making. Data provides the organisation with an image of itself, its environment, its history and its future. If this image is concrete, the organisation increases its ability to adopt and survive in changing environment. Otherwise, the organisation can incur substantial losses.
- **Incorrect decision making:** Making high quality decisions depends in part on the quality of data and the quality of decision rules that exist within computer based information systems. Inaccurate data can affect (i) the strategic planning decisions on the part of the managers, (ii) poor investment strategy on the part of the stakeholders and (iii) decision rules regarding calculation of depreciation of assets, payment of interest etc..
- **Cost of computer abuse:** Computer abuse means 'any incident associated with computer technology in which a victim suffered or could have suffered loss and perpetrator by intention made or could have made gain.' Some of the major computer abuses are hacking, virus, illegal physical access, abuse of privileges, destruction of assets, theft of assets, modification of assets, privacy violations, disruption of operations, unauthorised use of assets and physical harm to personnel. The average losses incurred from computer abuse seem to be substantially higher than those incurred from conventional fraud.
- **Value of computer hardware, software and personnel:** In addition to data, computer hardware, software and personnel are critical organisational resources. Inadequate insurance coverage may cause considerable disruption due to intentional or unintentional loss of hardware. If software is corrupted or destroyed, the organisation might be unable to continue operations if it cannot recover the software promptly. Lost of software may lead to substantial loss by the way of disclosure of business secrets to competitors and it may also draw legal hazards.
- **High cost of computer error:** Computer performs many critical functions automatically. Consequently, the cost of a

computer error in terms of loss of life, deprivation of liberty or damage to the environment can be high. Organisation will be held responsible for damages that occur as a result of errors in the design, implementation or operation of their computer system.

- **Maintenance of privacy:** Much data is now collected about us as individuals: taxation, credit, medical, educational, residence and so on. The powerful data processing capabilities of computers, particularly their rapid throughput, integration and retrieval capabilities cause many people to wonder whether the privacy of individuals or organisations has now been eroded beyond acceptable levels. Computer personalities should have a responsibility to ensure that data is used only for the purposes intended.

- **Controlled evolution of computer use:** Selection and deployment of technology should be done considering the socio-economic condition of the country, mental and physical well-beings of the people.

### ***IT Audit and Regularity Audit:***

- An IT audit is similar to a financial statement audit in that the study and evaluation of the basic elements of internal control are the same.

- The purpose of a financial statement audit is to determine whether an organisation's financial statements and financial conditions are presented fairly in accordance with Generally Accepted Accounting Principles (GAAP).

- Regarding Protection-of-Information-Assets, one purpose of an IT audit is to review and evaluate an organisation's information system's availability, confidentiality, and integrity by answering questions such as:

- Will the organisation's computer systems be available for the business at all times when required? (Availability)
- Will the information in the systems be disclosed only to authorised users? (Confidentiality)
- Will the information provided by the system always be accurate, reliable, and timely? (Integrity).

### ***Types of IT***

- **Systems and Applications:** an audit to verify that systems and applications are appropriate to the entity's needs, are efficient, and are adequately controlled to ensure valid, reliable, timely, and secure input, processing, and output at all levels of a system's activity.

- **Information Processing Facilities:** an audit to verify that the processing facility is controlled to ensure timely, accurate, and efficient processing of applications under normal and potentially disruptive conditions.

- **Systems Development:** an audit to verify that the systems under development meet the objectives of the organisation and to ensure that the systems are developed in accordance with generally accepted standards for systems development.

- **Management of IT and Enterprise Architecture:** an audit to verify that IT management has developed an organisational structure and procedures to ensure a controlled and efficient environment for information processing.

- **Client/Server, Telecommunications, Intranets, and Extranets:** an audit to verify that controls are in place on the client (computer receiving services), server, and on the network connecting the clients and servers.

### ***IT Audit Process***

The following are basic steps in performing the Information Technology Audit Process:

1. Planning
2. Studying and Evaluating Controls
3. Testing and Evaluating Controls
4. Reporting
5. Follow-up

### ***Preliminary evaluation***

- The first step in audit should be preliminary evaluation of the computer systems covering:

- how the computer function is organised.
- use of computer hardware and software
- applications processed by the computer and their relative significance to the organisation and
- methods and procedures laid down for implementation of new applications or revision to existing applications.

- In course of preliminary evaluation, the auditor should ascertain the level of control

awareness in the auditee organisation and existence (or non-existence) of control standards.

- The preliminary evaluation should inter-alia identify potential key controls and any serious key control weaknesses.
- For each control objective the auditor should state whether or not the objective has been achieved; if not, he should assess the significance and risks involved with due to control deficiencies.

### **Audit methodology**

- After completing the preliminary evaluation of the computer systems, the auditor has to decide about the appropriate audit approach; system based or direct substantive testing. In doing so, the aspects to be borne in mind are:

- results of the preliminary evaluation
- extent to which reliance can be placed on any work carried out by Internal Audit and
- nature of any constraints like lack of any audit trail and the practicability of testing.
- effective compliance testing of key computer controls (which may be difficult) and
- each control to be tested will require large samples.

- For System Based Audit approach, aspects of regularity, economy, efficiency and effectiveness of the system have to be looked into besides evaluating data integrity, and data security as explained below:

- System effectiveness is measured by determining whether the system performs the intended functions and whether users get the needed information, in the right form when required;
- System activities would be regular if they comply with applicable laws, rules, policies, guidelines etc;
- Achieving data integrity implies that the internal controls must be adequate to ensure that errors are not introduced when entering, communicating, processing, storing or reporting data; and
- Data system resources, like other assets, must be sufficiently protected against theft, waste, fraud, unauthorized use and natural disasters.

- Compliance testing of controls in computer systems and programmes is difficult and complicated as their operation is automatic, invisible and not fully evidenced (only the

exceptions are normally evidenced). Detailed manual testing of these controls is rarely cost effective, but a possible alternative approach is to use Computer Aided Audit Technique (CAAT). For example, either test data or audit software may be used to test a control which is designed to ensure that payments exceeding a certain value should not be made.

- Audit software can be used to interrogate the whole payments file to identify any payments which exceeded the specified value.

### **Audit techniques**

- IT audit techniques refer to the use of computers, including software, as a tool to independently test computer data of audit interest. Some well-established techniques are:

- Collecting and processing a set of test data that reflects all the variants of data and errors which can arise in an application system at different times;
- Using integrated test facilities, built into the system by the auditee to help the auditor in his requirements, as one of the users of the system;
- Simulating the auditee's application programmes using audit software to verify the results of processing;
- Reviewing programme listings periodically to see that there are no unauthorised alterations to the programmes;
- Using either commercial software or in-house developed programmes to interrogate and retrieve data applying selection criteria and to perform calculations and
- Extracting samples of data from the auditee database/files, using sampling techniques, for post analysis and review. The nature of data and type of analysis required determine what technique is to be employed. The auditor should give the sample size and design.

### **Main Points to be checked in different Audit Areas**

#### **Audit of Acquisition**

Generally the acquisition of computer facilities involves the following stages:

- Definition of a computer policy and strategy (evaluation of organisational requirements and the ways and means of satisfying them);
- Establishing the need;
- A thorough examination and evaluation of the alternative courses of action available;

- Specifying precisely the requirements (delineating existing and future applications, hardware, software, modes of operations, conditions of supply, etc.);
  - Evaluating the alternative sources of supply and selecting the most appropriate source(s), and;
  - Physically acquiring the facilities and the systems.
- Often these stages tend to overlap or merge imperceptibly, into one another.

### **Main points to be checked by Audit in System Development**

- Whether a published standard methodology is being used for designing and developing systems?
- Whether there is a common understanding by all parties-users, systems analysts, management and auditors-of the basic structure of both manual and computer processing activities, as well as of the concepts and needs for control and of the applicable control techniques? (This understanding must be reached first at a non-technical, user level)
- Who authorises IT applications development – the user or steering Committee or management?
- Whether the system development work was preceded by a feasibility study to determine the most appropriate solutions to standard problems?

### **Audit of Operation and Maintenance - General Controls Organisational controls**

Such controls ensure that (i) there is judicious separation of duties to reduce the risk of employee fraud or sabotage by limiting the scope of authority of any individual, (ii) there are comprehensive written standards and (iii) access to and use of computer terminals is properly authorised.

### **Physical Access controls**

Physical access controls include the environmental controls which operate across the whole IT environment and affect all underlying computer applications. These controls are designed to protect the computer hardware and software from damage, theft and unauthorised access. Access controls can operate on various levels, for example, from restricting access to the client's site, to installing key locks on individual

PCs. The IT Auditor should get a quick assessment of physical access controls. Restricting physical access to the IT systems reduces the risk of unauthorised persons altering the financial information.

### **Authorisation Controls**

Authorisation control helps verify the identity and authority of the person desiring to attempt a procedure or an operation. This control is exercised through use of passwords, signatures, smart cards, cryptographic systems etc. Such-controls ensure that only an authorised person has access to the system and its use, to enter and/or alter transactions, to take information etc.

### **Logical Access controls**

Logical Access controls are provided to protect the financial applications and underlying data files from unauthorised access, amendment or deletion. Logical access controls can exist at both an installation and application level. The importance of logical access controls is increased where physical access controls are less effective, for example, when computer systems make use of communication networks (LANs and WANs). The existence of adequate logical access security is particularly important where a client makes use of wide area networks and global facilities such as the Internet.

### **Operation and File Controls**

Operation and file controls are meant to ensure safeguarding the computer and computer files from unauthorised access, loss or theft. Controls relating to reception, conversion and processing of data and distribution of the final output promote the completeness and reliability of these operations and safeguard against the unauthorised processing of data or programmes.

### **Change Management Controls**

Change management controls are used to ensure that amendments to a computer system are properly authorised, tested, accepted and documented. Poor change controls could result in accidental or malicious changes to the software and data.

IT Audit should emphasise that auditee organisations which update their computer systems should have appropriate change management and configuration management controls. Configuration management procedures relate to the control of IT assets (i.e. hardware, software, documentation and communications) and the subsequent update of records, whilst change management relates to the authorisation, impact assessment, asset update, testing and implementation of changes.

### **Network Communication Security Controls**

Network communication security controls are important where LANs/WANs or web enabled systems are in use. Some important aspects to be covered by this control are as follows:

- (i) All sensitive information in the network should be protected by using appropriate techniques;
- (ii) The critical network devices such as routers, switches and modems should be protected from physical damage;
- (iii) The network configuration and inventories should be documented and maintained;
- (iv) Prior authorisation of the Network Administrator should be obtained for making any changes to the network configuration.
- (v) The changes made in the network configuration should be documented. The threat and risk assessment of the network after changes in the network configuration should be reviewed.
- (vi) The network operation should be monitored for any security irregularity. A formal procedure should be in place for identifying and resolving security problems.
- (vii) Physical access to communications and network sites should be controlled and restricted.
- (viii) Communication and network systems should be controlled and restricted to authorised individuals.
- (ix) Network diagnostic tools, e.g., spectrum analyzer protocol analyzer should be used on a need basis.
- (x) Firewalls: Intelligent devices generally known as "Firewalls" should be used to isolate an organisation's data network from any external network. Firewall devices should also be used to limit network connectivity from unauthorised use. All firewalls should be subjected to thorough test for vulnerability prior to being put to use and at least half-yearly thereafter. All web servers for access by Internet users should be isolated from other data and host servers.
- (xi) Connectivity: Organisations should establish procedures for allowing connectivity of their computer network or computer system to any outside computer system or networks. The permission to connect other networks and computer systems should be approved by the Network Administrator and documented. All unused connections and network segments should be disconnected from active networks.
- (xii) Network Administrator: Each organisation should designate a properly trained "Network Administrator" who is responsible for operation, monitoring security and functioning of the network. Only authorised and legal software should be used on the network.

### **Business Continuity Planning**

The auditor should ensure that there are adequate plans to resume processing in the event of failure of computer operations. The degree of continuity planning will depend on the size of the IT department and the dependence on computer processing. A significant and prolonged loss of IT capability in a mission critical system may increase the risk of the financial statements being unavailable or materially mis-stated. Disaster recovery planning for IT facilities should be treated as one element of an organisation's overall business continuity plan.

Back-up copies of systems software, financial applications and underlying data files should be taken regularly. Back-ups should be cycled

through a number of generations by, for example, using daily, weekly, monthly and quarterly tapes. Back-ups should be stored, together with a copy of the disaster recovery plan and systems documentation, in an off-site fire-safe.

### **Audit of Operation and Maintenance - Application Controls**

Application controls are particular to an application and may have a direct impact on the processing of individual transactions. These controls are used to provide assurance (primarily to management) that all transactions are valid, authorised and recorded.

Application Control requirements may be divided into:

- (i) Documentation standards
- (ii) Input control
- (iii) Processing control
- (iv) Output control
- (v) Master/Standing Data File control
- (vi) Audit requirements

#### **Documentation Standards**

Documentation standards ensure that adequate and up-to-date system documentation is maintained. Careful updating of documentation is also important. There should be standards in auditee organisation to ensure that:

- (i) system documentation is sufficiently comprehensive.
- (ii) documentation is updated to reflect system amendments and
- (iii) a back-up copy of the documentation is held.

Without good documentation, it will be difficult to assure that controls will operate on continuous basis and there will also be greater likelihood of error.

Documentation should include:

- a system overview;
- user requirements specification;
- programme descriptions and listings;
- input/output descriptions;
- file contents descriptions;
- user manuals; and
- desk instructions.

#### **Input Controls**

The objective of Input control is to ensure that the procedures and controls reasonably guarantee that (i) the data received for processing are genuine, complete, not previously processed, accurate and properly authorized and (ii) data are

entered accurately and without duplication. Input control is extremely important as the most important source of error or fraud in computerised systems is incorrect or fraudulent input.

#### **Data Transmission Controls**

These controls are built in to IT Applications to ensure that data transmitted over local or wide area networks is valid, accurate and complete. Organisations using networks should ensure that there are adequate controls to reduce, to an acceptable level, the risk of data loss, unauthorised transactions being added and data corruption. There are a number of controls that may be used to address these problems:

- Digital signatures may be used to verify that the transaction contents are intact and that the transaction originated from an authorised user;
- Data encryption techniques may be used to prevent the interception and alteration of transactions.

#### **Processing Controls**

Processing controls ensure complete and accurate processing of input and generated data. The objectives for processing controls are to ensure that:

- transactions processing is accurate;
- transactions processing is complete;
- transactions are unique (i.e. no duplicates);
- all transactions are valid; and
- the computer processes are auditable.

#### **Output Controls**

These controls are incorporated to ensure that computer output is complete, accurate and correctly distributed. It may be noted that weakness in processing may sometimes be compensated by strong controls over output. A well-controlled system for input and processing is likely to be completely undermined if output is uncontrolled. Reconciliation carried out at the end of the output stage can provide very considerable assurance over the completeness and accuracy of earlier stages in the complete cycle. Output controls ensure that all output is:

- (i) produced and distributed on time,
- (ii) fully reconciled with pre input control parameters,
- (iii) physically controlled at all items, depending on the confidentiality of the document and
- (iv) errors and exceptions are properly investigated and acted upon.

#### **Master/Standing Data File Controls**

Master/Standing Data File controls are meant for integrity and accuracy of Master Files and



Standing Data. Accuracy of data on Master and Standing files is of vital importance, to the auditor. Information stored in master and standing data files is usually critical to the processing and reporting of financial data. Information on master files can affect many related financial transactions and so must be adequately protected. These have to ensure that:

- (i) amendments to standing data are properly authorised and controlled.
- (ii) integrity of Master and Standing Files is verified by checking, control totals and periodic reconciliation with independently held records.
- (iii) special amended facilities are properly recorded in and then use controlled by management authorisation and subsequent review and
- (iv) physical and logical access to application data files are restricted and controlled.

## Illustrations

### **Illustration-I**

**Audit of IT Governance with reference to implementation of PRIME and AFRES – a case study based on the Draft Para issued by Office of the Principal Director of Audit, Eastern Railway.**

(Chapter 2 of Union Government (Railways), No. 11 of 2006)

#### **Highlights**

- Delays in acquisition of infrastructure and implementation of the system has already resulted in a time over run of three years and cost over run of Rs.1.63 crore, which were bound to increase as the system was yet to be tested and implemented.
- Avoidable expenditure of Rs.0.30 crore was incurred due to delay in purchase of hardware. Oracle licenses and other software were injudiciously purchased in excess of requirement.
- Isolated implementation of additional software at a cost of Rs.0.13 crore with inadequate system security rendered it vulnerable to unauthorised access. The implementation was not in consonance with the extant orders of Railway Board and defeated its objective of uniform implementation of standard application in all railways.

#### **Introduction**

- Two applications namely **Pay Roll** and **Independent Modules** (PRIME) and **Advanced Financial and Railway Expenditure Management System** (AFRES) were implemented in Eastern Railway. Whereas AFRES covers the Financial Management areas like Bill Passing, Book Keeping, Costing, Fuel, Assets, Cash & Pay, Budget & Finance, and Inspections etc PRIME deals with Payments, Recoveries, Leave account, Provident Fund, Pension and other activities of all Railway employees and also interfaces with AFRES sharing common database and information exchange. IT governance is the structure of relationships and processes to direct and control the organisation in order to achieve the organisation's goals by adding value while balancing risks and returns over IT and its processes. This review deals with the evaluation of IT governance in Eastern Railway with reference to implementation of the two applications.
- IT governance in Eastern Railway was evaluated with reference to systems acquisition and implementation of PRIME and AFRES. COBIT (Control Objectives for Information and Related Technology) – an international framework was used to evaluate the IT Governance. The IT implementation processes were evaluated with reference to railway codal provisions with regard to planning and organisation, acquisition, implementation and monitoring of the systems.

#### **Audit objectives**

- Audit of IT governance in Eastern Railway was conducted with a view to assess the
  - adequacy and effectiveness of IT planning and management to ensure proper organisation and availability of requisite technological infrastructure; and
  - effectiveness of implementation of the IT system and its integration with the business process.

### Scope and methodology

- The IT implementation processes have been evaluated with regard to planning and organisation, acquisition, implementation and monitoring of the system, using COBIT (Control Objectives for Information and Related Technology), an international framework. The areas particularly covered were formation and working of the task force, implementation procedures adopted, procurement of hardware and software, user feedback, debugging and customization, trial/ parallel run and management reporting. User feedback was analyzed to bring out the lacunae in the system. Information was also gathered from interviews with staff and officers. However live data could not be analyzed as the system was yet to be implemented.

### Planning and management

- This domain of COBIT covers vision, strategy and tactics concerned with planning, communication and management so that a proper organisation as well as technological infrastructure is put in place.
- Audit observed inadequacies in the performance of the task force set-up by the Railway Board and in planning and technical support from the Systems Development Team of Southern Railway.

### Information technology organisation

- In May 2002, Railway Board instructed Eastern Railway to form a task force consisting of FA& CAO (WST)\* as Chairman, Director Finance (CCA)\*\* as representative of Railway Board and Senior Electronic Data Processing Manager of Eastern Railway as secretary of the task force. Four other members from user departments were also to be nominated. The task force was entrusted with the overall responsibility of implementing the project as per time targets and was to meet and report the implementation status fortnightly to the Railway Board.
- Audit observed that except for one user member and the secretary, the other members of the task force were not nominated by Eastern Railway (ER). Meetings of the task force were not held regularly. In spite of repeated reminders from the Railway Board, ER failed to intimate the status of implementation regularly.

\* *Financial Advisor and Chief Accounts Officer (Works, Stores and Traffic)*

\*\* *Computer Co-ordination of Accounting Policy*

### Inadequate planning

- Though the Railway Board fixed June 2002 as the target date for commissioning the system, ER could only finalise the specifications of the operating system and processor platform by June 2002. It was observed that the objective of Railway Board to implement the system all over Indian Railways uniformly was not achieved in the absence of finalisation of source code and commissioning of hardware, which were prerequisites for the project. Further, the planning process also did not include the organisational model, geographical distribution, technological evolution, legal and regulatory requirements, future planning horizon, business process information re-engineering and staffing and costs as envisaged under COBIT. Performance indicators were also not incorporated in the plan. The chairman of the task force had also recorded that arrangement of minimum basic hardware and operating system to run the system on trial before the target date of 30 June 2002 was not a feasible proposition and that since ER was not given any of the pilot projects, it did not possess the requisite infrastructure to launch such a massive programme. This indicated that planning was inadequate.

### Inadequate dissemination of technical expertise by Systems Development Team

- Although the Systems Development Team of Southern Railway had developed the software, it did not render any assistance in implementing the software in ER except for supplying oracle software. Though, Railway Board had envisaged that one team from Southern Railway would assist ER in

implementing the system, the same was not made available to ER. Testing and implementation of the application was outsourced to a private firm, as, according to ER, the limited number of personnel in the Systems Development Team of Southern Railway could not be expected to implement the application in all the zonal railways. Inadequate dissemination of technical expertise led to isolated attempts at customising the application at ER and the objective of uniformity in implementation of the application was not achieved.

### **Acquisition and implementation of the system**

- This domain of COBIT covers the realization of the IT strategy so that IT solutions are implemented and integrated into the business process. In addition, this domain covers changes in and maintenance of existing systems to ensure that the life cycle is continued for these systems.
- Audit observed that there were delays in acquisition of infrastructure. Apart from time and cost overruns, Audit Noted injudicious purchase and inconsistent customisation of software without obtaining user requirements, resulting in avoidable expenditure.

### **Time and cost over runs**

- The project was to be implemented in ER by June 2002 at an estimated cost of Rs.1.76 crore. Railway Board took one year, from July 2001 to June 2002, to fix the specification of operating software and processor platform. However, the railway administration is yet to procure the required hardware though three  
19 Report No.11 of 2006 (Railways)
- Years had elapsed from June 2002. The software also required modifications, which was not completed till date (June 2005). Thus, inability of ER to provide proper infrastructure has resulted in a time over run of three years. Further, ER revised its estimate for implementing the project to Rs.3.39 crore mainly due to the increase in the costs of RISC servers and oracle licenses. The servers and oracle licenses, which were previously estimated at Rs.0.42 crore and Rs.0.08 crore respectively, were expected to cost Rs.1.80 crore and Rs.0.25 crore respectively as per the revised assessment. Failure to acquire the hardware and software as per schedule resulted in a cost over run of Rs.1.63 crore, which was avoidable. The extent of cost over run and time over run was bound to increase even more as the system was yet to be tested and implemented.
- ER stated that owing to rapid pace of technology, quick obsolescence and continuous upgradation in IT hardware, superior products were available with increased cost implications; the higher cost paid was for products with higher customer value. The reply was not acceptable since quick obsolescence was an ongoing process in IT sector and acquisition of infrastructure cannot be indefinitely delayed awaiting the advent of superior products. Utility of the products has to be correlated to the intended use.

### **Avoidable expenditure due to delay in purchase of hardware**

- Railway Board advised (May 2002) the task force to provide two servers and 10 to 15 PCs. Accordingly, in May 2002, ER hired two servers and 5 PCs for a period of 11 months at a cost of Rs.0.02 crore for porting and customization of PRIME and AFRES. This hardware, however, was returned without completion of porting and customization rendering the expenditure infructuous. Subsequently, in May 2003, ER procured five more PCs at a cost of Rs.0.02 crore for the same purpose and in March 2004 purchased six Xeon servers along with other hardware at a cost of Rs.0.25 crore.
- Audit observed that even though the requirement of RISC servers to implement PRIME and AFRES was known well in advance, ER processed the procurement of RISC servers only in February 2005, by which time an expenditure of Rs.0.30 crore was already incurred on hire and purchase of temporary servers, PCs (used as servers) and Xeon servers. Thus, expenditure could have been avoided had the final hardware been purchased at the outset.

### **Networking**

- Although the application was an online project, no networking was done except in small Local Area Networks in Headquarters and divisions separately. The tender for networking was yet to be finalised.

### **Injudicious procurement of software**

- Against the requirement of 65 (Headquarter-15, Howrah- 25 . and Asansol-25) Oracle 8i EE users license and three licenses each of two other softwares (Form Developer and Report Developer) projected by ER, Southern Railway released an order for Oracle 8i.
- Form Developer and Report Developer as committed off-take for ER. ER received 65 licenses out of which only 39 licenses (Head Quarters 15, Howrah (HWH) 12 and Asansol (ASN) 12) could be utilized by it. Audit observed that there was already a stock of Oracle licenses for sixteen users in Howrah division, which was not taken into account while assessing the quantity to be indented. Hence, ER received 42 Oracle licenses, two Form Developers and two Report Developers approximately costing Rs.0.12 crore in excess of requirement. In May 2002 a release order was issued for supply of Oracle licenses (25 users) costing Rs.0.05 crore to Asansol Division of ER. Since the Division had no hardware for installing the same, it was forced to return the licenses to the purchaser. Southern Railway also issued a release order for supply of 175 numbers of Oracle 8i (EE) along with software support for Workshops, while none of the Workshops was included in the project.

### **Customisation of software**

- Audit observed that user requirements were not obtained which led to inconsistency in customisation apart from the avoidable expenditure in modification and customisation.
  - Review of modules of PRIME and AFRES revealed that there was a module viz., “Catering” but no programme had been incorporated in the module either in the development stage or in the modification stage. In the absence of such a programme, it would not be possible to maintain the activities of the catering accounts through PRIME and AFRES.
  - Audit observed that 256 custom changes were made in the system at ER Headquarters whereas the number of changes in Asansol Division was 34. No details were available in respect of Howrah Division. Audit observed that for the same software different customization was undertaken by different users of the same category at an approximate expenditure of Rs.0.15 crore Rs.0.10 crore already incurred and Rs.0.05 crore yet to be incurred indicating that requirement of customisation was not properly assessed and it has been undertaken as and when noticed. Scrutiny of accounts and records further revealed that there were many change requests received from the users and 81 of them required modification of even the source code.

### **Acceptance of software not conforming to codal provisions**

- Audit observed that two formats (Ledger and Section Code) were developed in the system, which did not conform to the formats given in the codes prevailing in Indian Railways.

### **Trial run and parallel run**

- In the system development cycle trial run is undertaken to find out the errors in the system and parallel run is undertaken to assess stability of the system after removal of such errors by necessary modifications in the system.
- Even though customisation of the system undertaken in October 2004 was yet to be completed,
- Accounts department in ER was undertaken in November 2002. This was not acceptable since it is not possible to undertake parallel run prior to complete development of the system.
- ER claimed subsequently that it had conducted a parallel run of payroll module since February 2005 and live run in respect of pension from May 2005. As yet, ER has only produced a pay bill generated for 23 employees for verification.

### **Isolated implementation of additional software**

- Railway Board reiterated in November 2003 that zonal railways should not invest monies on isolated attempts of computerisation viz; Provident Fund accounting, bill passing, personnel functions etc. as the investment would be rendered infructuous since system development teams were specifically formed for uniform implementation of standard applications on all railways. It further mentioned that local variants of applications lack in standard development procedures and were thus fraught with risk of frauds. The General Manager/ER, however, directed the Chief Personnel Officer, in January 2004, to plan a user friendly project for making relevant staff service particulars such as provident fund balance, leave and loan etc. available on a touch screen kiosk to enable any member of staff to retrieve his details on an interactive basis. The software was developed in a manner that a touch screen would accept the employee’s Provident Fund number as input, validate its correctness and thereafter display all the details of an employee.

- The system was commissioned in March 2004 in Headquarters office. Seven other similar systems were also commissioned in all divisions and workshops over ER during the year 2004-05 at a total cost of Rs.0.13 crore. Development of all these systems was not in consonance with the objective of the Railway Board of uniform implementation of standard applications in all the railways.
- Audit scrutiny further revealed that though the system was designed to function like an ATM, the requisite system security e.g. sign-on entry, insertion of hardware key, access restriction with password etc was not provided in the system for checking users' identity. Under the existing system, therefore, anybody could gain access to the system by inputting a Provident Fund number. This left the accounts of 1,33,613 numbers of employees having a total Provident Fund balance of Rs.1,483.49 crore (as of March, 2005) vulnerable to unauthorised access.

### **Recommendations**

- Railways need to ensure adequate planning and provision of required hardware to avoid further delay in implementation of the application and avoid additional expenditure.
- User's requirement should be invariably taken into account for development /customization of applications.

### **Conclusion**

- The IT Governance environment in Eastern Railway was found lacking in timely and proper implementation of major IT initiatives. The software applications were customised without obtaining users' requirements. This led to modifications of the system with added cost. The system could not be implemented within the stipulated period due to poor functioning of the task force responsible for implementation of the project, non-procurement of specified hardware and modifications of software. Poor implementation of the system resulted in cost and time overrun, which were likely to increase further.

During a review of the financial adjustments of the PRS earnings among the Indian Railways, a new procedure evolved in October 1999, it was noticed that there were some complaints from some of the Railway Administrations that the data supplied by the Central Agency (Traffic Accounts Office at Secunderabad was nominated as the Central Agency for this task) was inaccurate affecting their share of PRS earnings. The Safety Surcharge was also not tallying with the amounts shown in CONCERT system report. Some of these aspects were being enquired into for clarifications. The position on each of the railways may be considered for review.

### **Illustration-II:**

## **Audit of Computerised Passenger Reservation System of the Indian Railways**

(Chapter 1 of Railways Report No. 11 of 2007)

### **Highlights**

Railways did not set out clear milestones or targets for the switch over from BSNL channels to their own OFC network. Even where the zonal railways had chalked out action plans, these were not adhered to and the progress of switch over was very slow. Railways continued to largely rely on hired BSNL channels with recurring expenditure towards hiring of the channels even though there were frequent and extensive failures of BSNL channels, disrupting the PRS services. There were also no service level agreements between the Railways and BSNL explicitly setting out the minimum guaranteed efficiency and penalties for failure and as a result the Railways did not have a structured redressal mechanism against BSNL.

Reservation System also posed problems and reservations to intermediate stations were not possible. The Coaching Refund System was not integrated with the PRS.

General controls comprising system documentation, sound IT security practices, change management and structured disaster recovery policy were inadequate. There were deficiencies both in physical access and logical access controls. The total number of users with supervisory privileges was very high and booking clerks were also routinely assigned supervisory privileges, creating a risk of possible misuse of the powers associated with the privileges.

The mechanism of change management was inefficient and policy changes were not incorporated in the system software in a timely manner. There was no structured disaster recovery policy and the maintenance and protection of infrastructure as well as the data was inadequate.

Application controls were weak and a number of tickets were booked on fictitious details, indicating bogus/proxy booking in advance and thereby decreasing the availability of seats to genuine passengers. Validation checks for generation of pre-bought tickets, for journeys involving more than one lap, were weak. The system permitted generation of a zero value ticket for the second lap without generating the ticket for the first lap. Seats/ berths were also blocked for dummy passengers using the pre-bought facility.

The application software did not have validation checks to ensure compliance with the rules governing break journey. Various quotas for accommodation in trains were not properly managed resulting in decrease in availability of seats to the general public; this also resulted in loss of revenue to the Railways.

Fares and distances were incorrectly adopted leading to incorrect levy of fares. The electronic databases contained numerous deficiencies rendering the data unreliable.

Even though allotment of berths was meant to be a zero error process, multiple instances were noticed where the system allotted the same berths to different passengers.

Trains and stations were incorrectly defined in the system thereby preventing reservation of accommodation against them. The status of late running of trains was not set promptly leading to incorrect refunds to passengers.

The internal control mechanism in respect of custody and utilisation of ticket rolls was weak and the ticket rolls were susceptible to misuse.

### **Introduction**

The Indian Railways (IR) carries about 5.5 lakh passengers in reserved accommodation every day. The computerised Passenger Reservation System (PRS) facilitates booking and cancelling of tickets from any of the 4000 terminals (i.e PRS booking windows) all over the country. These tickets can be booked or cancelled for journeys commencing in any part of India and ending in any other part, with travel times as long as 72 hours and distances up to several thousand kilometers.



The pilot project of PRS was launched on 15 November 1985, over Northern Railway with the installation of the Integrated Multiple Train Passenger Reservation System (IMPRESS), an online transaction processing system developed by the Indian Railways in association with Computer Maintenance Corporation (CMC) Ltd., at New Delhi. The objective was to provide reserved accommodation on any train from any counter, preparation of train charts and accounting of the money collected. This application was subsequently implemented in 1987, at Mumbai, Chennai, Kolkata and Secunderabad. With the addition of new locations and many redefinitions, the IMPRESS system fell short of growing expectations of the traveling public. Hence a new application software, i.e., Country Wide Network for Computerised Enhanced Reservation and Ticketing (CONCERT) was developed by the Centre for Railway Information Systems (CRIS), New Delhi primarily using 'C' and also using 'FORTRAN'. The application was first implemented at the Secunderabad PRS site in September 1994 and subsequently at the other four PRS sites. Currently, the PRS servers are maintained at the five sites in Delhi, Mumbai, Kolkata, Chennai and Secunderabad and operate in a distributed database process environment.

Communication of all the terminals with their server was established using Railway/ Department of Telecommunication (DOT) channel lines, fibroptic cable/microwave channels, switches, modem, multiplexers etc. The inter-networking of five PRS nodes was completed in April 1999. Interconnectivity is established between the five PRS centres over 2 mbps leased Bharat Sanchar Nigam Limited (BSNL) lines. The system has the capability of issuing reserved tickets from anywhere to anywhere, in any train, date or class between any pair of stations from any booking terminal of the PRS.

### **Audit objectives**

The review of PRS (CONCERT) was conducted with a view to assessing whether:

- the acquisition and maintenance of hardware, communication network and software including system design were adequate and effective;
- the general controls were adequate and system was operating in an adequately controlled environment;
- the application controls were adequate and the system was in compliance with rules and adequately secured from possibilities of fraud;
- there was an effective mechanism to ensure most economic usage of available resources; and
- the accounting arrangements and control mechanism for credit card transactions were adequate.

### **Audit scope and methodology**

The scope of audit included evaluation of the application and was primarily concerned with the transactions related to booking of tickets from the terminals operated by the railway personnel. Control Objectives for Information and related Technology (CoBIT) was referred to as a frame of reference for evaluation of the IT system. For application controls, 'test data method' including simulation and online enquiries were used to evaluate data validation and program logic. The reports generated by the PRS were also studied. Audit also selected data, as made available by the various zonal railways, pertaining to periods of fifteen days to three months of the year 2005-2006 for substantive checking of the completeness, integrity and consistency of data using Computer Assisted Audit Techniques namely, Interactive Data Extraction and Analysis (IDEA) and Structured Query Language (SQL).

The records maintained by Commercial Department of all zonal railways and those related to five PRS server locations at Delhi, Mumbai, Chennai, Secunderabad and Kolkata, and at CRIS office at New Delhi were also reviewed. Discussions were held with railway officials, CRIS personnel and users to gain understanding regarding the various functional aspects of the system.

Provisions contained in Indian Railway Conference Association (IRCA) Coaching Tariffs, Commercial Manual Volume I, Railway Codes & Manuals and orders of the Railway Board were also referred to as frames of reference.

### **Deficient acquisition and maintenance**

Acquisition and maintenance of hardware, including the communication network, is a vital phase in implementation of any computerised system. For the system to function effectively, it is imperative to ensure that the hardware procured is compatible. Piecemeal and ad hoc procurement results in mismatches with a possible impact on system efficiency. In PRS, the role of the communication system is also vital, as the functioning of the system is primarily dependent on the performance of the network. It is also essential that the system is comprehensively designed, taking into account all operational requirements. In 2001, the 'VAX' servers were replaced with 'Alpha' servers, both of Compaq manufacture. A review, however, disclosed that:

- Failure to take user requirements into account and inadequate assessment of needs led to augmentation of capacity in a piecemeal fashion after implementation of the 'Alpha' systems. Arrangements for maintenance of software and hardware were also inadequate.
- While the Railways recognised the importance of switching over to their own OFC network, they did not set out clear milestones or targets for the switch over. Even where the zonal railways had chalked out action plans, these were not adhered to and the progress of replacement of the BSNL channels by Optical Fibre Cables (OFC) of the Railways was poor. Consequently, the Railways continued to rely largely on hired BSNL channels with recurring expenditure towards hiring of the channels though there were frequent and extensive failures of BSNL channels disrupting the PRS services.
- The PRS had design deficiencies necessitating manual interventions during program terminations and link failures. The system did not validate the advance reservation period for special trains introduced in some cases. The Current Day Reservation System also posed problems and reservations to intermediate stations were not possible. The Coaching Refund System was also not integrated with the PRS.

### **Deficient acquisition and maintenance of hardware**

Audit observed several deficiencies in the acquisition and maintenance of hardware and software over various zonal railways as brought out below:

- With the growth of PRS activity and increased load on back end PRS systems, the Railways felt it necessary to augment its infrastructure and accordingly replaced the existing 'VAX' systems with 'Alpha' systems, both of Compaq manufacture, in September 2001. The procurement of Alpha servers at a total cost of Rs.9.10 crore was done centrally by NR for all five PRS sites. The configuration of the systems and other technical specifications were finalised by CRIS. On ER, the Alpha servers were procured to replace the old 'VAX 4705' systems, without obtaining the requirements of the users/PRS sites. Since they were found not compatible with the existing 114GB disk space and two Optical Drives (ODs), ER did not decommission the old 'VAX 4705' systems. The use of non-compatible ODs and lack of maintenance resulted in failure of one OD. ER had to carry out the entire backup work with the help of the one working OD. The additional load on the single working OD led to a system crash on 19 March 2003. Improper assessment of requirements also resulted in procurement of additional hardware and servers in a piecemeal fashion, with delays up to 28 months, in some zonal railways.
- The preventive maintenance of various PRS locations (Rail-head and Non Rail-head) was not in accordance with the Annual Maintenance Contracts (AMC) concluded and the shortfall on NFR accounted for as much as 79 per cent of the scheduled maintenance for the period from January 2004 to March 2006. Railway Board decided (May 2002) that maintenance of PRS hardware should also be carried out through CRIS, the software maintenance organisation, instead of M/s CMC, the then maintenance contractor. The single PRS window service, through CRIS, came into effect from October 2002. CRIS, however, further subcontracted the annual maintenance of Alpha servers for all the PRS sites to M/s CMC limited, New Delhi, for the period from 1 May 2005 to 30 April 2006. In spite of involving CRIS, the performance of the contractors was not satisfactory particularly in ER, where there were undue delays in rectification of faults. Preventive maintenance was also not carried out regularly and the penal provision was not acting as an effective deterrent for ensuring efficient delivery.
- The terms of AMC provided that all reservation centres should maintain a minimum of 25 per cent of spare modems and multiplexers (MUX). Twenty two PRS centres in Dhanbad division on ECR, however, did not maintain adequate spares. As a result, the defective equipment had to be sent to Kolkata for replacements. Till the replacement arrived at the location, the counter/location had to remain closed resulting in inconvenience to the public. On NFR too, the PRS activity was disrupted for considerable periods from January to March 2006 due to non-maintenance of the requisite level of spares. Further, ER incurred an avoidable expenditure of Rs.0.25 crore due to failure to exclude obsolete equipments from the AMC.
- In December 2001, Railway Board issued guidelines for providing PRS facility only at sites, which had a minimum of 100 transactions per day. This was in line with the thinking that maintenance of a PRS centre involves investment as well as operational expenditure. However, it was observed that at least 171 booking locations in different zones were operational, where transactions per day were less than 100 per day. Given the estimated expenditure of Rs.6 lakh for setting up a PRS site, the continuance of these 171 booking locations required re-examination keeping future requirements in view. During discussions at Railway Board, it was mentioned that the Railways intend to merge Unreserved Ticketing System (UTS) with PRS and utilisation of infrastructure created at these locations would be optimised in future.

### **Deficient acquisition and maintenance of communication network**

Data communication between locations and servers was either through leased lines from BSNL/MTNL or through Railway's own communication channels. Important locations had two channels, either two DOT channels or a combination of DOT and Railway channels. The smaller locations, however, had only one channel, either of DOT or of the Railways. The data communication channels were either of 9.6 kbps or 64 kbps capacity. However, there were inadequacies in the channel availability as detailed below:

- With the progressive availability of the Railways' OFC network it was decided to use this network for PRS communication also and instructions to this effect had been issued as far back as in April 2004 by Railway Board. In August 2005, the Railway Board reiterated that all zonal railways should switch over to the Railway OFC network for enhancing the reliability of communication and to reduce recurring expenditure on the hired BSNL channels. However, no targets or milestones were specified by Railway Board. The zonal railways identified the locations where switch over to Railway OFC network could be effected. But, the progress of replacing BSNL channels with OFC was found to be very slow. On NER, ER, SR and SWR, totally 153 channels were identified for transfer to the OFC network by March 2006, but only 41 were finally transferred to OFC with a recurring rental expenditure of approximately Rs.0.66 crore per annum on the remaining BSNL channels. Further, on SER, in respect of 14 PRS locations, though the OFC network was available, BSNL channels were continued with an additional expenditure of Rs.0.15 crore per annum towards hiring of these BSNL circuits.
- Frequent and extensive failures of BSNL channels were noticed at various locations on ER, SER, NER, NFR and ECR resulting in disruption of PRS activities. Thirty to 50 incidences of channel failures per day were reported and the duration of these failures ranged up to as much as 1,086 hours. At one PRS location alone, (Abhaipur of Malda Division), ER estimated a revenue loss of Rs.0.22 crore due to link failures over a period of seven months from January 2005 to July 2005. Further, in Samastipur division of ECR, one additional back up channel was hired from BSNL, at a cost of Rs.0.12 crore per annum. The back up channel also failed on many occasions along with the main channel thereby defeating the purpose of hiring the extra channel.
- The Railways faced a number of problems in the restoration of disrupted BSNL channels as the maintenance was very poor. Consequently, channels remained out of order for days together. Further, there was no service level agreement between the Railways and BSNL explicitly setting out the minimum guaranteed efficiency and penalties for failure. As a result, the Railways did not have a structured redressal mechanism against BSNL, despite frequent and prolonged channel failures.
- Further, channel hire charges of Rs.0.10 crore were paid in respect of the eight locations on NR, which were either yet to be opened or were not functioning during the periods for which payments were made.
- NFR incurred an avoidable expenditure of Rs.0.25 crore for the period from April 2002 to March 2006, towards rental charges of low speed data channels, despite having high speed 64 Kbps BSNL data channels at the same locations. They also paid rental charges at a rate higher than the actual applicable tariff for data circuits, resulting in an additional expenditure of Rs.0.91 crore for the period from 1 April 2001 to 31 March 2005. Additional expenditure of Rs.0.24 crore was also incurred due to non-implementation of the revised tariffs of leased data circuits from 1 April 2005 to March 2006. During discussions at Railway Board, it was mentioned that BSNL channels were essential at some strategic places but it was agreed that OFC channels had to be optimally utilised and accountability of BSNL for failures/inefficiencies had to be ensured.

However, the Railways had not switched over to their own OFC network, despite identifying BSNL channels that could be converted to OFC. Thus, while the communication network, on which the efficacy of the PRS largely depends, was deficient and not commensurate with the requirements of a pan India network, the Railways did not treat the setting up and utilisation of an OFC network with the urgency it required. There was no overall strategic plan with clear milestones to shift over to the Railways' OFC network and even those plans, which were made locally, were not adhered to.

### **Deficient system design**

Audit noticed several system design deficiencies in the CONCERT software as detailed below:

- The Master Client Program (MCP) is the main application program through which a terminal operator generates/prints a ticket. On SCR, it was noticed that at times of termination/disruption of MCP, the system did not alert the system administrator or console operator about the disconnection of a terminal and each time the terminal operator had to contact the console section over phone for restoration of the program. Further, in such cases of MCP termination, the amount of liability of a terminal operator i.e., the amount collected by him against the tickets booked, till the point of termination was not included in the Daily Trains Cash cum Summary (DTC) generated by the system at the end of the shift of that operator. The operator's liability till the time of MCP termination had to be manually intimated. There was inconvenience to the passengers as well. For instance, in May 2005 at SCR, while committing a block booking transaction, the MCP repeatedly got terminated, resulting in inordinate delays at the booking counters. The problem occurred frequently as noticed from the daily failure reports and CRIS was unable to identify the reasons and remedy the problem till date (September 2006).
- Further, while booking a ticket of another PRS site, in case of a link failure before printing the ticket, CONCERT treated the transaction as complete though the ticket was not printed. That failed transaction was saved in the database and reflected in the DTC, even though the operator had not issued any ticket and had not collected any money from the passenger. If the passenger was still available after restoration of the link, the operator had to search the data base for the saved transaction and then issue a blank paper ticket. Otherwise, the operator had to either resort to special cancellation or obtain special credit from the accounts department to reconcile the discrepancy in his/her liability.
- The system did not pick up all the journey tickets reserved through the system and did not properly account for the cash realised. At Badshahnagar station on NER, it was specifically observed that the booking clerks found excess cash of Rs.2,171 to Rs.4,446 with them and there was no system based process to cross check the amount with the tickets issued. Therefore, when excess cash was found, the actual cash was verified manually, on the basis of amount realised from passengers as shown in reservation forms. Thus, the DTC was not correctly made out by the system necessitating manual reconciliation. Even though these weaknesses existed in the accounting module of the PRS for a long period, no remedial measures were initiated.
- Charges of temporary nature levied in addition to normal fare are termed as 'ad-hoc charges'. A review of train profiles of five selected trains revealed that the system permitted imposition of only one ad-hoc charge at a time (SCR & ER). For instance, on SCR, the Railways had to manually collect the additional surcharge applicable during the Pushkaram on river Godavari, since levy of a surcharge, for the journey to Tirumala Tirupati Hills, was already provided on the system and there was no provision of imposition of another surcharge through PRS.

- The Advance Reservation Period (ARP) was 60 days excluding date of journey. However, the Railways operated special trains during festival/summer seasons and these trains had ARPs of less than 60 days. In such cases, these trains had to be disabled for reservation by the data base administrator and enabled manually on the opening date just before 08.00 hours, as the system could not check and validate ARP of less than 60 days. Railway agreed to the audit observation (CR).
- Under the computerised Current Day Reservation System the facility of booking of accommodation was provided in CONCERT, even after the charting was completed, subject to the availability of vacant berths. The facility of current day reservation was not available on some locations on NER and NFR and current reservations were done manually. On ER, the computerised Current Day Reservation System posed recurring problems. Reservation for travel to intermediate stations was not possible through the system even if a berth against the particular intermediate station was vacant. Reservation against vacant roadside quota was also not permitted by the system. Though the problems in the system existed for more than three years, they were not rectified. This was primarily due to the fact that CRIS failed to implement the software according to the requirements of ER and the software did not comply with many of the business rules of PRS.
- • Coaching Refund System (CRS) was an application developed by CRIS for granting refunds on reserved and RAC (Reservation against Cancellation) tickets, in cases where passengers failed to turn up or discontinued journey due to dislocation of train services or travelled by lower class etc., which was not possible through the PRS. However, CRS was not fully integrated with PRS and as a result, the operator had to toggle between PRS and CRS to process refunds. Thus, the software provided for the PRS had a number of deficiencies, which posed not only operational difficulties but also a higher risk of security due to the manual interventions required.

### Deficient general controls

General controls are those controls which regulate the environment in which the IT operations are run. These cover areas like IT practices pertaining to system documentation, IT security and information protection, change management policies, disaster recovery and business continuity planning. A review of the PRS revealed that:

- System documentation and various manuals were not adequate.
- Sound IT security practices were not followed and there were deficiencies both in physical access and logical access controls. The log out procedure was deficient and user privileges, especially the Supervisory *ids*, were allotted without considering the reasonableness of extending the privileges, thus, creating a risk of possible misuse of the powers associated with the privileges.
- Change management was inadequate and changes in the system necessitated due to change in/introduction of rules were not carried out in a timely fashion resulting in inconvenience to the travelling public as well as increasing the risk of loss of revenue to the Railways.
- There was no structured and documented disaster recovery policy for PRS over Indian Railways. The maintenance and protection of infrastructure as well as the data was also inadequate due to poor environmental controls.

### Inadequacy of system documentation

Good documentation of a computerised system reduces the risk of mistakes by users. Documentation should normally cover program descriptions and listings, input/output descriptions, file content descriptions, user manual and desk instructions. Essential documents of PRS system such as System Documentation, Operational Manual, Training Manual etc., were not available at the zonal levels. The risks associated with non-maintenance of sound documentation include:

- unauthorised working practices being adopted by IT staff;
- increase in the number of errors made by IT staff;

- the risk of system non-availability and increased down time in the absence of technical documentation which would help troubleshooting; and
- change management problems.

A number of instances of unauthorised working practices, differing system functionalities in various zones, errors in functioning of the system which remain unresolved for long periods of time and long system downtime are detailed throughout the review. These could have been avoided with adequate and regularly updated documentation.

### **Inadequate IT security practices**

Every organisation, which uses IT in a big way has an obligation to ensure security for IT and related assets including data, applications, infrastructure and personnel to ensure Confidentiality, Integrity and Availability of the information systems and communication systems that store, process and transmit the data. Checks to control the physical access, logical access, log in and log out procedures and user privileges should be adequately defined and provided for. The prevalent checks were inadequate as brought out below:

### **Inadequate physical access control**

The PRS, being a mission critical system, needs to be physically safeguarded with access only to specifically authorised personnel. In all the five locations where the PRS servers were kept, there was no effective mechanism such as an electronic control access system to physically disallow entry of unauthorised persons, thus rendering the entire PRS system vulnerable to disruption by outside and unauthorised elements. On CR, the PRS server in Mumbai was located in a building which also houses a Railway Magistrate court and a detention centre for keeping under-trial persons, rendering the building accessible to the public, thereby compromising the security of the system. Further, Railway Board had directed (May 1997) all zonal railways to install Closed Circuit Surveillance TV (CCTV) systems at important PRS centres to monitor and to detect other anti-social elements. However, it was seen that:

- The access to the PRS locations was neither restricted nor monitored through electronic security systems in most locations. While the CCTV systems were yet to be implemented at the PRS centers in some zonal railways (ECR, SR and ER), in some others, the system was installed only in some locations. The CCTV system was installed in one location only, out of 54 locations on SER and similarly, on WR they were installed in only seven out of 91 locations.
- Closed Circuit Surveillance TV systems installed at some locations were not functioning for various periods (SCR, WR and NFR). On NR, the two Palm Biometric ID systems installed at a cost of Rs.2.90 lakh, at the entrance of the console room housing the PRS servers, for restricting unauthorised entry, were not in use.

### **Inadequate logical access control**

Logical access (access through electronic means) to the PRS helps control and protect the applications and underlying data files from unauthorised access, amendment or deletion. The access was to be controlled by identifying each individual user through his/her unique login *id*, which was also linked to the user rights and access to various areas of the application. The system provided for two very important operation level rights as follows:

### Terminal Type User Type Rights

Booking Booking Access rights for performing enquiry/ reservations/ cancellation functions. Supervisor Supervisor Access rights for performing supervisory functions such as special cancellations, name change etc. In addition to all the above rights the activity of management of access rights and assignment of privileges was through the 'User Definition Management' (UDM), a software utility. Requests for new user *ids* and changes required were proposed by supervisors of locations and the database administrator assigned the requisite privileges to the user. Deficiencies in the user *id* and password management were observed as follows:

- The total number of users with supervisory privileges was very high and booking clerks were also routinely assigned supervisory privileges. To illustrate, the ratio of users having supervisory privileges to the users having only booking privileges was 88.58 per cent on ER, 83.20 per cent on SER, 81.66 per cent on NFR and 60 per cent on CR. Such high ratios were due to supervisory privileges being given to persons, who should have been given only booking privileges, thereby vitiating the concept of select rights at different levels of hierarchy.
- The user *ids* including supervisor *ids* assigned to the staff were neither deleted nor invalidated on the transfer/retirement/resignation of the staff (CR, ER, SER, WR, NR, SCR & SR). Even in a non-rail head PRS location such as Agartala, user *ids* were not deleted even after the transfer of the users to other government department/Union Territory. On SER, even after four months of issue of instructions for deletion of some users after their transfer, the user *ids* were continued as 'active users' in the data base, which was fraught with the risk of unauthorized access. Further, the database contained active user *ids* with unrealistic/absurd expiry dates such as '12/12/1999' and '12/12/2099'. On SR, an user *id* 'HARDWARMELA' having supervisory privileges and location privileges at Chennai main PRS centre was created for specific business, but was not deleted even after completion of the specific business.
- On some zonal railways, the system was accessed by different users through same *id*, an undesirable practice, particularly where the privileges allotted for the persons were different. For instance, on ECR, user *ids* and passwords were shared amongst more than one user. At the PRS centre in Anandnagar on NER, both the booking clerk and supervisor were found to be using the same *id* to access the system. Even in non-rail heads at Agartala and Port Blair, booking clerks were using supervisory *ids*.
- The system accepted a single digit password, in contravention of accepted standard IT practices. Moreover, the user accounts, which were not in use for a long time, were not automatically disabled. This made unauthorised access to the system, through dormant accounts with weak passwords, easier. (ECR, NR and SCR).
- On NR, the user *ids* and passwords were communicated by a messenger through open letters or telephonically and secrecy was not ensured. On SR too, ad-hoc measures, such as obtaining the administrator password from the representative of the firm responsible for system maintenance were in vogue, resulting in disclosure of confidential login information in an irregular manner and increasing the risk of tampering and manipulation of data by unauthorised persons.
- On SER, there was a difference between the actual number of users (61) as certified by the Chief Reservation Supervisor, Old Koilaghat and the number of active users in the User Management Database (UMD) file (132). On ER, user serial numbers were not generated serially and the list had gaps between serial numbers. User names such as 'ABC' and blanks were also seen in the database.



### Deficient log out procedure

The login and log out procedures define the user access to the system. Unless a proper log out procedure is followed, there is every danger of unauthorised access to the system. Similarly, log in restrictions control and to some extent prevent hacking of the system. A review of the system, however, revealed that:

- The system provided for temporary log out, where the user was required to leave the terminal for a very short period of time. A review of the logs on ECR, however, revealed that the time off was very high ranging from 15:38 to 112:23 minutes on certain days in a 12 hour period. Leaving the terminal unattended for such long periods of time resulted in passenger inconvenience.
- Further, the system did not automatically log out the user from the terminal in case the online terminal was left unattended/inactive for a long time. This coupled with the inadequate physical access rendered the PRS terminals susceptible to the risk of unauthorised access.
- Important security logs for capturing unauthorised login attempts at booking terminals were not even maintained (NR and SCR). Moreover, the system did not automatically shut down or at least alert the system administrator in case of repeated unsuccessful log in attempts.

### Improper and unmatched assignment of privileges to the users

Privileges were to be assigned to users at various levels on a select basis depending upon the functional responsibilities vested at each level and on a 'need to know' basis. The system had a set of default privileges for different sets of users and these were assigned by the system at the time of defining a user in the system. Some of the important privileges were 'quota', 'command' and 'location' privileges. Berths in trains were classified into different quotas such as General (GN), Ladies (LD), Tatkal (CK) etc. These quota privileges were required to be assigned to a user for booking tickets against them along with command privileges for performing reservation activities such as normal reservation, tatkal reservations, modification etc.

Location privilege is granted to a user in order to enable him to work in a particular location. Due to shortage of trained staff, a user may be allotted more than one location for administrative convenience. It was, however, noticed that:

- The user *id* database contained many active users with no location privileges. The field depicting the location of some users was found blank while some of the users were given privileges for multiple locations including locations of other railways, enabling access to the system from different locations by a single user and increasing the risk of misuse. (ER, SER, CR, WR and NFR). On ER, it was noticed that a user had privileges for 300 locations. On SER also, it was seen from the database that location privilege was granted to 105 users for 200 to 300 locations, including locations of other railways.
- Location privileges of railway PRS locations were also improperly assigned to booking clerks of non-rail heads at Agartala and Port Blair (ER).
- The privilege for booking of tickets for foreign tourists was allowed to all supervisors on all supervisory terminals as a default privilege, though tickets for foreign tourists were to be booked at only select locations. For instance on NR, tickets against foreign tourist quota were to be issued from the International Tourist Bureau, IRCA Building, New Delhi. However, it was observed that tickets were generated against foreign tourist quota from a number of other locations also.
- A quota cannot be operated unless and until both quota and command privileges are given to the user. However, it was seen that there was uneven distribution in the grant of these privileges. For instance, on SER at Old Koilaghat Building, it was noticed that supervisory users having quota privileges could not use them in the absence of corresponding command privilege. Similar problems in the grant of privileges were noticed at CR, WR and NER.
- The site privilege is necessary for accessing PRS sites and the five site privileges corresponding to the five PRS centres are D(Delhi), B(Mumbai), C(Kolkata), M(Chennai) and S(Secunderabad). But certain users were found to be given sites such as U, V, W, X and Y, not part of the standard

list. The zonal railway could not adequately explain the reasons for such sites or what they were supposed to denote.

- Further, at Pandu PRS location in Maligaon on NFR, users authorised to generate tickets against railway passes only, irregularly generated tickets of Rs.11,980 in cash also and the amount was not deposited to the railway exchequer. Moreover, a user authorised to operate only at this location also generated six tickets from PRS/Guwahati indicating that controls were weak.
- On SER, the hardware maintenance contractor (M/s CMC) engaged by CRIS was allotted a user *id* with most of quota, command and location privileges. These privileges enabled the contractor to issue reserved tickets, modify/cancel tickets and setting of train status etc., leading to a risk of unauthorised use of these privileges.
- The passenger dump contained numerous errors and the booking location was left blank in many records in the data base. On NR alone, 7,351 records did not indicate the booking location. The passenger dump also showed records with monetary values in locations, where monetary transactions could not take place. On CR, it was observed that in certain Passenger Name Records (PNRs), the terminal location was shown as CRIS in passenger dump, whereas the PNR history indicated that these tickets were issued from PRS locations. In some cases, booking location in passenger dump was shown as 'Pune', where as the PNR history showed that they were internet tickets. Thus, the privileges or rights allowed to the users did not match the requirements and were not as per the business rules of the system, thereby increasing the risk of unauthorised use of the system as well as undermining the efficacy of the system.

### **Change management**

A dynamic system such as the passenger reservation system is based on the policies of the Government. From time to time, the framework of rules undergoes changes and these would need to be incorporated into the system in time. A sound change management procedure ensures that the requisite changes are made into the software in an authorised, accurate and timely fashion. It was noticed that:

- Various concessions are made from time to time to passengers according to the policy decisions of the Railways. However, a test simulation exercise on NR revealed that concession codes for all the categories of passengers were not provided in the system. For instance, concessions were admissible for the escorts of blind and mentally retarded children below the age of five for travel in various classes. However, there was no code provided in the system to enable generation of concession tickets against I AC and AC 2 tier. Similarly, parents accompanying children receiving the "National Bravery Award" and eminent sports coaches who have received the Dronacharya Award are entitled to concessional tickets but no provision was built into the system to book such concessional tickets.
- Pursuant to Government of India notification of March 2006 regarding introduction of service tax on catering services on board the trains of Indian Railways, service tax for catering service on Rajdhani / Shatabdi trains was to be included in the fare structure. It was, however, observed that, the service tax on catering services provided on Rajdhani/Shatabdi trains of WR, was not included in the fare structure, which resulted in short recovery of Rs.0.42 crore for the period from 1 April 2006 to 31 May 2006. Railway Administration stated that this has since (June 2006) been introduced after obtaining necessary instructions from Railway Board.
- On NFR, audit also noticed that there was considerable delay, ranging from 34 days to 14 months, in incorporation of new distances between pairs of stations for 12 trains.
- Mela surcharge was not incorporated in the system for the Pitrapaksh Mela at Gaya and Punpun Ghat in 2005 (PRS Kolkata -ER). Though mela surcharge was imposed for 'Mugh Mela' held at Allahabad from 14 January 2006 to 26 January 2006, the Railway Administration advised PRS Kolkata to incorporate mela surcharge only on 6 January 2006, 52 days after reservations were opened for the Mela, by which time most of the tickets had already been sold, leaving it to the Travelling Ticket Examiners, to collect the surcharge from passengers during the journey. Thus, the mechanism to carry out changes in the software in line with the changes in the framework of rules was not efficient.

### **Disaster recovery and business continuity plan**

A structured Disaster Recovery Plan is essential to reduce the risks arising from unexpected disruption of the critical systems and to have continuity in business activities. The Disaster Recovery Plan usually includes provision for off-site storage of valuable data and also a back-up server(s) at an alternative location to continue the business operations, in the event of a major disaster at the main server(s) site. Depending on the criticality of the operations and the risk to business, these back up sites could be either hot sites or cold sites. Applications such as PRS depend on the continuous online processing of transaction on a real time basis. Therefore, at the very least, there should be a ready-to-start reserve facility with offsite storage of important data, to support these operations in case of disruption. The data processing operations of the PRS are critical to the Indian Railways with over 96 per cent of reserved accommodation, particularly on long distance trains, being catered through PRS and any disruption could affect the passenger traffic seriously. It was, however, observed that:

- There was no structured and documented disaster recovery policy for PRS over Indian Railways. It was stated that a policy for disaster recovery was being formulated by the Railway Board.
- There were no alternate sites with reserve servers for transacting reservation related business in case of a physical or man made disaster. With PRS being mission critical in nature, a prolonged downtime involving days/weeks to recover could have even law and order consequences.
- In most of the Railways, all the servers of PRS, Unreserved Ticketing System and National Train Enquiry System were kept at the same location increasing the risk of business loss in the event of a disaster.
- As per the orders of the Railway Board, backup of daily PRS data was to be maintained for 3½ years. However, in all the five places where the PRS servers were located, there was no provision for remote off site storage of data at an alternate location to overcome situations like fire, earthquake, sabotage etc. Back up data was stored along with the servers exposing it to the same set of risks.
- The backed up data has also to be tested periodically to ensure that it can be retrieved easily and is not corrupted. However, at PRS Mumbai and on SCR, though the procedure of backing up data was in vogue, the periodic testing revealed that either the data was not backed up properly or the tapes were damaged.
- Fire alarm detection system was not installed at many locations (PRS Kolkata- ER and PRS centers on NER). The fire alarm system installed at Secunderabad, was not functioning since February 2002.
- Further, the PRS locations on various zonal railways were not adequately protected. On SR, the PRS was not protected from water seepage, which coupled with failure of the electric supply, resulted in a complete failure of PRS in October 2005. Similarly, at Kanpur Anwarganj too, there was flooding of PRS cabin due to rains, since proper insulation was not provided. At Port Blair, the PRS location became inoperative in April 2004 due to thunderstorms. In December 2005, due to the absence of a surge protection device the multiplexer was destroyed. On NER, PRS centers were found provided with coolers, which increase the humidity levels and could damage systems, instead of air conditioners.

- The non-rail head PRS location at Imphal, serving a considerable part of North East India, was gutted on 24 April 2005 due to inadequate fire protection and was not operational for a period of seven months. Delayed restoration not only affected railway revenue and expenditure, but also hampered the interests of passengers. Thus, while there was no efficient disaster recovery plan, even the maintenance and protection of the infrastructure as well as the data was deficient due to poor environmental controls

### **Deficient application controls**

Application controls are those controls which ensure that the transactions are carried out according to the business rules of the organisation by the authorised persons. These controls contain validation checks to cover input, processing and output operations of the systems. Validation checks ensure that the transactions are processed according to the business rules. Further, one of the main objectives of the PRS was to bring more transparency to the entire process of booking of tickets and to make available seats/berths to bonafide passengers according to the extant rules of the Railways. However, a number of important validation controls were either absent or deficient in CONCERT and the system was susceptible to misuse in a manner, which adversely affected the objective of transparency in seat availability to the passengers as detailed below:

- Transactions were done beyond the time of booking from different terminals of PRS locations.
- Validation checks were weak and a number of tickets were booked on fictitious details, indicating a risk of bogus/proxy booking in advance and thereby decreasing the availability of seats to genuine passengers.
- Validation checks for generation of pre-bought tickets (tickets for the second lap where the journey involved more than one lap) were weak and the system did not validate the class of travel and the name of the passenger. The system permitted generation of pre-bought tickets without generating a ticket for the first lap and even where a second lap of journey was not involved and seats/berths were blocked for dummy passengers using the pre-bought facility.
- The application software did not have validation checks to ensure compliance with the rules governing break journey.
- Various quotas for accommodation in trains, as prescribed by the Railways, were not properly managed resulting in decrease in availability of seats in various trains to the general public, which resulted not only in loss of revenue to the Railways but also provided scope for malpractices in berth allotment during the journey.
- Deficiencies existed in the validation of fares. Fares and distances were incorrectly adopted leading to incorrect levy of fares.
- The electronic databases contained numerous deficiencies by way of incompleteness, incorrectness and unreliability and any decision support system based on the MIS from this data was bound to be adversely affected.
- Even though allotment of berths was meant to be a zero error process, multiple instances were noticed where the system allotted the same berths to different passengers.
- Trains and stations were incorrectly defined in the system, thereby preventing reservation of accommodation against them. The status of late running of trains was not set promptly leading to incorrect refunds to passengers.
- The system did not provide compact accommodation in case of multi passenger reservations

### **Transactions beyond the specified time of booking**

As per extant instructions, booking counters of the PRS were to be opened from 0800 hours to 2000 hours. However, from the various reports generated internally by the Railways, it was observed that transactions were done beyond the specified time of booking from different terminals of PRS locations on ER, ECR, SCR and SER. The number of transactions done after 2000 hours in a location ranged up to 225. On ER, a test check for a single day indicated 95 transactions that were recorded before the opening time of the PRS counters i.e., from 0500 and 0800 hours. On SCR, a terminal operator at Nellore generated three tickets on a day in April 2005 between 0715 and 0758 hours. SCR replied (April 2006) that in the special form designed for booking tickets under 'Tatkal Scheme' time validations were not incorporated, though such validations existed in other forms and that after this problem was reported to CRIS, time validations were incorporated in the 'Tatkal' booking form also. However, there was yet another case of issue of a ticket in sleeper class through 'Tatkal' at 0757 hours on 27 April 2006 at Ongole. On SER, even though the PRS location at Santragachi, functioned for one shift only from 0800 hours to 1400 hours the system was printing the ticket beyond 1400 hours also

### **Booking of accommodation on fictitious names**

Validation checks are required to be in place to ensure that tickets are booked with proper details and for genuine passengers.

- Simulation exercises conducted on CR, ECR and SCR and review of records on NR, revealed that the system accepted single letter names and many passengers were found to be booked with single letter names. Eighty two passengers were booked in the name of 'MRS' and 43 passengers were booked in the name of 'PTY' on 13 October 2005 on NR, for travel from Nizamuddin to Madgaon for a sports party and the ages of all the passengers were shown as '99', the default setting, indicating that ages were not keyed in. Moreover, at Mumbai PRS on WR, it was observed that 30,381 tickets were booked, for the period from 1 October 2005 to 31 December 2005 with such passenger names as 'TBA', 'ANKL', 'PTY', 'Cricket player', 'Railway courier', 'Pay Bill Clerk' etc., without indicating ages.
- Further, the provision in the system to change the boarding points was being used without proper controls. A scrutiny of statement of change of boarding points for a transaction date generated from the system revealed that in 20 cases, the age of passengers was not mentioned. Similarly, in the related PNRs, the names of the passengers had multiple numeric characters (ER).

### **Allotment of same berths to different passengers**

Multiple instances were observed where same berths were improperly booked to different passengers by the system. On SCR, the same berth (No.50), in coach AS 2 by train no. 7054 of 27 January 2006 was allotted to different passengers. Similarly, the same berth (No19) in coach S4 by train no. 8004, of 26 June 2006 was allotted to different passengers. Audit scrutiny of records at Dhanbad location on ECR, also revealed that on 23 July 2006, a ticket was booked from Bokaro Steel City to Patna by Train No. 8624, and berths 25, 28 and 44 in coach S6 were allotted. Two other tickets were booked by the same train on 23 July 2006 from Ranchi to Patna and the system improperly allotted the same berths.

Similarly, instances of allotment of berths through current booking against berths already booked through the normal reservation system were noticed.

On ER, two passengers i.e., one booked in advance and the other booked after charting, were allotted the same berth (No 9) of S1 coach in Train No.2307 on 27 December 2005. Further, similar problems were reported for some of the reservations made through current day booking counter for train No. 1603 of 21 June 2006. The lapses were reported to CRIS for rectification

### **Deficient controls for break journey facility**

As per break journey rules, the holder of a single journey ticket for distances of more than 500 kms, is allowed to break journey at any station en-route. The first break of journey shall not, however, be made until a distance of 500 kms has been travelled from the starting station. Further, as per rules, the second lap of the journey needs to be performed within two days of the first lap. However, it was noticed that:

- The system did not validate the details of the person undertaking the second lap of journey, allowed break journey before the stipulated 500 kms and failed to check the number of days between two legs of break journey. The system also did not have in-built controls to check the number of days allowed for the break and accepted even a gap of fifteen days from the date of commencement of the first journey.
- A test check on ER, revealed that a passenger was allowed to break the journey at 342 kms and then proceed after a break of one day for the next leg, which was not in accordance with extant rules.

### **Inadequate validation for fares and tickets**

The two static files namely Intermediate Station Files (ISFs) and the Fare Table are used by the system for fare computation and the output is stored in a separate file. The Fare Dump file for each of the trains defined in the system stores details in respect of the station codes, via points, distances and fare for each class of travel. Deficiencies existed in the system with regard to validation of fares, fare tables, printing tickets and final charting as detailed below:

- The system did not validate fares as admissible under the rules. For instance, the distance between Howrah and Azimganj by 2065 up and 2066 down Jana-Shatabdi Express was 217 kms. As per the fare table, the fare for the distance was Rs.95, and the concessional fare for Senior Citizens was Rs.67. But it was seen that the system charged a fare of Rs.97/- as base fare and Rs.72 as concessional fare for Senior Citizens, which was more than the fare leviable as per the rules.
- Fares were also incorrectly adopted by the system. On a test check of two Rajdhani trains, commencing from Hazrat Nizamuddin and bound for Trivandrum and Chennai respectively, it was noticed that there was short collection of fare for about 10 pairs of stations ranging between Rs.5 and Rs.105 from April 2003 to March 2006. Similarly, wrong adoption of fares in Rajdhani trains (2429, 2430, 2431 and 2434) for about three pairs of stations resulted in excess collection of fares ranging between Rs.10 and Rs.60. On NR too, a comparison of fare dump of different Rajdhani trains (46 pairs of stations) with the Rate Tariff Circulars of NR, revealed discrepancies in fares between same pair of stations of excess as well as short charging of fares ranging up to Rs.845 and Rs.125 per head respectively.
- Instances were noticed on NER and NR, where tickets were printed as 'No room' by the system. The system should not have permitted printing of such tickets at all.

### **Incorrect adoption of distance**

The chargeable distances are calculated by the PRS on the basis of distances entered in the system. In calculating the distance for charging the fare, fraction of a kilometer is taken as one kilometer. The distances calculated by the Commercial Department and vetted by the Traffic Accounts Department were entered into the computer system by the database section. Several inconsistencies were observed in the adoption of distances leading to levy of incorrect fares as brought out below:

- The distance for the up direction was different from the distance for the down direction in respect of 57 trains<sup>1</sup> on CR, ER, NER, SCR, SER and NFR. Moreover, in 801 cases<sup>2</sup> the distance adopted for the same pair of stations for different trains on the same route was different. These discrepancies could result in either overcharging the passenger or in loss of revenue to the Railways. Additionally, on NWR, distances were incorrectly entered in the system for 12 pairs of stations over Jaipur division resulting in short realisation of fare to the extent of Rs.0.55 crore during 2002-03 and 2004-05.
- It was observed on WR that in respect of 700 pairs of stations distance vetted by accounts and input in the system varied between one and 13 kilometers for different trains. Traffic Accounts

Department did not verify the correctness of the distance vetted, subsequent to input of the data. On CR also, it was observed that distance statements were not authenticated by accounts department as proof of vetting.

### Recommendations

- Railways should strengthen its communication network and reduce BSNL links to the bare minimum. Where BSNL links have to be continued for strategic reasons effective performance must be ensured through proper agreements and penal clauses.
- The system design deficiencies need to be rectified based on user requirements to prevent manual interventions. Coaching Refund System needs to be integrated with Passenger Reservation System.
- Railways should maintain the system documentation and manuals to enable referencing at the operational levels and develop a comprehensive IT policy encompassing IT security. Adequate physical access controls should be instituted to safeguard PRS assets and access controls should be strengthened to ensure accountability for transactions. Assignment of various privileges should be standardised and adequate controls need to be established to prevent misuse of privileges.
- Railways should institute a mechanism for incorporating changes promptly. A structured disaster recovery policy should be developed with off-site back up sites for business continuity as well as data storage. The PRS locations should be adequately protected from damage through fire, water etc.
- Railways should build adequate checks to prevent reservation on fictitious or incomplete details and to enhance credibility and confidence in the system. Adequate validation checks should also be instituted for generation of pre-bought tickets. Any transaction of a pre-bought ticket for second lap should be validated with the details of the first lap of journey. The business logic and corresponding rules for break journey have to be adequately built into the system with validation checks to ensure compliance.
- Railways should strengthen its control mechanism to ensure that accommodation under various quotas is not misused and that unused accommodation in these quotas is taken back to the general pool systematically to optimise utilisation.
- Railways should rectify the application, to correct the fare table and institute a mechanism at the appropriate level to ensure that distances between stations are uniformly adopted in the system, so that fares can be correctly levied. The inaccuracies in the master tables should also be rectified immediately to enhance reliability of data and to render generation of meaningful reports.
- The software needs to be rectified to prevent multiple bookings against the same berth, as allotment of berths to passengers should be a zero error process. Suitable modifications in the program need to be carried out to provide compact accommodation for multi passenger reservation having a combination of confirmed reservation and waitlisted/RAC status.
- Railways should strengthen its control mechanisms to define the train profiles in the system as per the physical composition of trains. En route stations also have to be correctly defined for trains. Suitable mechanism should be developed to ensure that status of late running of trains is set promptly in the system so that cancellation charges are computed correctly.
- The internal control mechanism to monitor the supply and custody of unused ticket rolls needs to be strengthened. Physical verification of ticket rolls should be conducted periodically to prevent misuse of tickets.

## **Conclusion**


The Passenger Reservation System is a prominent example of how Information Technology can be leveraged to provide transparency and convenience to users on a very large scale and is a pioneering e-governance initiative in the country. However, an IT enabled system on such a vast scale, also requires rigorous controls to sustain operations and to ensure that it is being run as intended, and complying with all the relevant rules and regulations. The system was found to have a few major design deficiencies and the areas of concern were related to system based and manual controls. These leave the system open to the risk of misuse adversely affecting the seat/berth availability to general passengers. The system also had design deficiencies which caused inconvenience to the passengers. Moreover, crucial areas covering security of the system and data, system and process documentation, database management, change management and user privilege management processes were either inadequate or poorly addressed. Absence of a structured disaster management policy coupled with associated work practices exposes the system to serious risk of disruption, in case of a physical disaster.



Slide 1

**Session: 10**

**IT Audit –  
Concepts and application**



Training Module on 'Audit of Railways'; Session:10

4

Slide 4

**Need for Information System Audit**

- Seven factors influencing an organisation towards control and audit of Information System
  1. Organisational cost of data loss
  2. Incorrect decision making
  3. Cost of computer abuse
  4. Value of computer hardware, software and personnel
  5. High cost of computer error
  6. Maintenance of privacy
  7. Controlled evolution of computer use

Training Module on 'Audit of Railways'; Session:10

4

Slide 2

**Learning Objective**

- In this session, the participants will be able to understand the basic concepts of IT Audit which will help them to focus on audit issues in the actual work context.

Training Module on 'Audit of Railways'; Session:10

2

Slide 5

**IT Audit and Regularity Audit**

- An IT audit is similar to a financial statement audit-
  - study and evaluation of the basic elements of internal control are the same.

Training Module on 'Audit of Railways'; Session:10

5

Slide 3

**Introduction**

- Formerly called an Electronic Data Processing (EDP) audit,
- An examination of the controls within an entity's Information technology infrastructure.
- Reviews may be performed in conjunction with a financial statement audit, internal audit, or other form of attestation engagement.
- A process of collecting and evaluating evidence of an organization's information systems, practices, and operations.

Training Module on 'Audit of Railways'; Session:10

3

Slide 6

**IT Audit and Regularity Audit contd.**

- One purpose of IT audit is to review and evaluate an organisation's information system's availability, confidentiality, and integrity by answering questions such as:
  - Will the organization's computer systems be available for the business at all times when required? (Availability)
  - Will the information in the systems be disclosed only to authorised users? (Confidentiality)
  - Will the information provided by the system always be accurate, reliable, and timely? (Integrity).

Training Module on 'Audit of Railways'; Session:10

6

Slide 7

**Types of IT**

- Systems and Applications
- Information Processing Facilities
- Systems Development
- Management of IT and Enterprise Architecture
- Client/Server

Training Module on 'Audit of Railways'; Session:10

7

Slide 10

**Audit Techniques**

- collecting and processing a set of test data that reflects all the variants of data and errors which can arise in an application system at different times;
- using integrated test facilities, built into the system by the auditee to help the auditor in his requirements, as one of the users of the system;
- simulating the auditee's application programs using audit software to verify the results of processing;
- reviewing program listings periodically to see that there are no unauthorised alterations to the programs;

Training Module on 'Audit of Railways'; Session:10

10

Slide 8

**IT Audit Process**

- Planning
- Studying and Evaluating Controls
- Testing and Evaluating Controls
- Reporting
- Follow-up

Training Module on 'Audit of Railways'; Session:10

8

Slide 11

**Audit Techniques contd.**

- Using either commercial software or in-house developed programs to interrogate and retrieve data applying selection criteria and to perform calculations and
- Extracting samples of data from the auditee database/files, using sampling techniques, for post analysis and review.
- The nature of data and type of analysis required determine what technique is to be employed.
- The auditor should give the sample size and design.

Training Module on 'Audit of Railways'; Session:10

11

Slide 9

**Preliminary Evaluation-The First Step**

- How the computer function is organised
- Use of computer hardware and software
- Applications processed by the computer and its significance
- Level of control awareness in the auditee Organisation and existence (or non-existence) of control standards.
- Identifying potential key controls and any serious key control weaknesses.
- Achievement of objectives.

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9

Slide 12

**Points to be checked in different Audit Areas - Audit of Acquisition**

- Definition of a computer policy and strategy;
- Establishing the need;
- A thorough examination and evaluation of the alternative courses of action available;
- Specifying precisely the requirements delineating existing and future applications,

Training Module on 'Audit of Railways'; Session:10

12

Slide 13

**Points to be checked in different Audit Areas - Audit of Acquisition contd.**

- Hardware, software, modes of operations, conditions of supply, etc.;
- Evaluating the alternative sources of supply and selecting the most appropriate source(s), and;
- Physically acquiring the facilities and the systems.

Training Module on 'Audit of Railways', Session:10

13

Slide 16

**Points to be checked by Audit-General Controls contd.**

- Physical Access Controls
  - Controls are designed to protect the hardware and software from damage, theft and unauthorised access.
  - IT Auditor should get a quick assessment of physical access controls.
  - Extent of physical access control to the IT systems is sufficient to reduce the risk of unauthorised persons altering the financial information.

Training Module on 'Audit of Railways', Session:10

16

Slide 14

**Points to be checked by Audit - System Development**

- Standard methodology is being used for designing and developing systems.
- Common understanding by all party-users, systems analysts, management and auditors on
  - computer processing activities,
  - concepts and needs for control.
- Authority of IT applications development – the user or Steering Committee or management?
- System development work was preceded by a feasibility study.

Training Module on 'Audit of Railways', Session:10

14

Slide 17

**Points to be checked by Audit-General Control contd.**

- Authorisation Control
  - This control is exercised through use of passwords, signatures, smart cards, cryptographic systems etc.
  - Such controls ensure that only an authorised person has access to the system.

Training Module on 'Audit of Railways', Session:10

17

Slide 15

**Points to be checked by Audit -General Controls**

- Organisational Controls
  - Judicious separation of duties to reduce the risk of employee fraud by limiting the scope of authority of any individual,
  - (ii) there are comprehensive written standards and (iii) access to the computer terminals is properly authorised.

Training Module on 'Audit of Railways', Session:10

15

Slide 18

**Points to be checked by Audit-General Controls contd.**

- Logical Access Controls
  - Provide to protect the financial applications and data files from unauthorised access.
  - The importance of this controls is increased where physical access controls are less effective.
  - The existence of adequate logical access security is particularly important where a client makes use of wide area networks and global facilities such as the Internet.

Training Module on 'Audit of Railways', Session:10

18

Slide 19

**Audit of Operation and Maintenance - Application Controls**

- These controls are used to provide assurance (primarily to management) that all transactions are valid, authorised and recorded.
- Application Control requirements may be divided into:
  - Documentation standards
  - Input control
  - Processing control
  - Output control
  - Master/Standing Data File control
  - Audit requirements

Training Module on 'Audit of Railways'; Session:10 19

Slide 22

**Audit of Operation and Maintenance - Application Controls** contd.

- Input Controls
  - IT Auditor is to ensure that
    - procedures and controls reasonably guarantee that
      - the data received for processing is genuine, complete, not previously processed, accurate and properly authorised and
      - data is entered accurately and without duplication. Input control is extremely important as the most important source of error or fraud in computerised systems is incorrect or fraudulent input.

Training Module on 'Audit of Railways'; Session:10 22

Slide 20

**Audit of Operation and Maintenance - Application Controls** contd.

- Documentation Standards
  - IT Auditor is to ensure that:
    - system documentation is sufficiently comprehensive.
    - documentation is updated to reflect system amendments
    - a back-up copy of the documentation is held.
    - Without good documentation, it will be difficult to assure that controls will operate on continuous basis and there will also be greater likelihood of error.

Training Module on 'Audit of Railways'; Session:10 20

Slide 23

**Audit of Operation and Maintenance - Application Controls** contd.

- Data Transmission Controls
- IT Auditor is to ensure that
  - Data transmitted over local or wide area networks is valid, accurate and complete.
  - There are adequate controls to reduce the risk of data loss, and data corruption.
  - Digital signatures are used to verify that the transaction contents are intact and that the transaction originated from an authorised user;
  - Data encryption techniques are used to prevent the interception and alteration of transactions.

Training Module on 'Audit of Railways'; Session:10 23

Slide 21

**Audit of Operation and Maintenance - Application Controls** contd.

- Documentation should include:
  - a system overview;
  - user requirements specification;
  - program descriptions and listings;
  - input/output descriptions;
  - file contents descriptions;
  - user manuals; and
  - desk instructions.

Training Module on 'Audit of Railways'; Session:10 21

Slide 24

**Implementation of IT Audit in Railways – few examples**

- Following are the areas where Railway Audit has found irregularities in IT of the Indian Railways:-
  - non implementation of software resulting in cost over- run and time over run;
  - inadequacies in the performance and in planning and technical support from the systems development team;

Training Module on 'Audit of Railways'; Session:10 24

Slide 25

**Implementation of IT Audit in Railways –  
few examples contd...**

- performance indicators are not incorporated in the IT plan;
- inadequate planning e.g. non-existence of the requisite infrastructure to launch/run IT;
- inadequate dissemination of technical expertise by system development team resulting in delay or non-implementation of application in zonal railways;
- absence of uniformity in implementation;
- delays in acquisition of infrastructure resulting in time and cost over runs;

Training Module on 'Audit of Railways'; Session:10

25

Slide 26

**Implementation of IT Audit in Railways –  
few examples contd...**

- injudicious purchase and inconsistent customisation of software without obtaining user requirements resulting in avoidable expenditure;
- systems developed by the team do not conform to the formats given in the codes prevailing in the Indian Railways;
- systems are not developed as per user requirements which led to inconsistency in customisation apart from the avoidable expenditure in modification and customisation.

Training Module on 'Audit of Railways'; Session:10

26



# **Session: 11**

## **Performance Audit of Railways**

<b>Session Title: Performance Audit of Railways .</b>		Session Guide
<b>Instructor's Guide</b>	<b>Reference</b>	<b>Participants' Response</b>
<b>Session Overview</b>		
<b>Welcome</b> participants to the session and remind them that their active participation is critical for the success of each session.	Lecture	
<b>Learning Objective</b>		
<b>Inform:</b> Given the inputs of Performance Audit of Railways through group discussion, lecture and PowerPoint slide show, the participants will at the end of the session acquire basic concepts of Performance Audit which will help them to focus on audit issues in the actual work context.	Lecture	
<b>Basic Concepts</b>		
<b>Discuss:</b> <ul style="list-style-type: none"> <li>● Regularity Audit (Compliance), Regularity Audit (Financial)</li> <li>● Performance Audit including economy and efficiency and programme audit.</li> <li>● Performance Audit Guidelines.</li> <li>● Performance Auditing in SAI India.</li> <li>● Mandate for Performance Audit</li> <li>● Standard Format for furnishing information</li> <li>● Factors guiding selection of subjects</li> <li>● Performance Audit plan and Setting the Audit objectives</li> <li>● Central Review guidelines</li> <li>● Implementation of Performance Audit</li> <li>● Structure, Language and Evidence of the report</li> <li>● Sampling Techniques.</li> <li>● Discuss the given case as an example.</li> </ul>	Lecture with PowerPoint Slide show <b>Session 11 Performance Audit of Railways and example of PA</b>	
<b>Summarise:</b>		
<b>Distribute</b> Participants' Note. <b>Tell</b> the participants that during the session, we discussed Regularity Audit(Compliance, Financial), Performance Audit guidelines, Performance Audit Plan and Setting the Audit objectives, Implementation of Performance Audit, Structure, Language and Evidence of the report etc. <b>Invite</b> questions on themes discussed. If participants have any doubts/clarifications about themes, clarify the same. Answer participants' queries. <b>Thank</b> the participants and bring the session to a close.	Participants' Note Session 11	

**Training Method:** Interactive Lecture and Power Point Slide Show.

**Materials Required:** Power Point Slides, Projector, White Board, Marker Pen and Participants' Note



## **Session Title:** **Performance Auditing in Railways**

### **Session Overview:**

While fulfilling his Constitutional obligations, the Comptroller & Auditor General of India examines various aspects of Government expenditure. The audit done by C & A G is broadly classified into Regularity Audit and Performance Audit.

### **Regularity Audit (Compliance)**

- Audit against provision of funds to ascertain whether the moneys shown as expenditure in the Accounts were authorized for the purpose for which they were spent.
- Audit against rules and regulations to see that the expenditure incurred was in conformity with the laws, rules and regulations framed to regulate the procedure for expending public money.
- Audit of sanctions to expenditure to see that every item of expenditure was done with the approval of the competent authority in the Government for expending the public money.
- Propriety Audit which extends beyond scrutinizing the mere formality of expenditure to its wisdom and economy and to bring to light cases of improper expenditure or waste of public money.
- While conducting the audit of receipts of the Central and State Governments, the Comptroller & Auditor General satisfies himself that the rules and procedures ensure that assessment, collection and allocation of revenue are done in accordance with the law and there is no leakage of revenue which legally should come into Government coffers.

### **Regularity Audit (Financial)**

In regularity (financial) audit and in other types of audit when applicable, auditors should analyze the financial statements to establish whether acceptable accounting standards for financial reporting and disclosure are complied with. Analysis of financial statements should be performed to such a degree that a rational

basis is obtained to express an opinion on financial statements.

### **Performance Audit**

Performance auditing is essentially a process that uses available evidence to form an opinion on the extent to which an agency utilizes its resources in an economic, efficient and effective manner.

- The INTOSAI Auditing Standards define a Performance Audit as 'an audit of the economy, efficiency and effectiveness with which the audited entity uses its resources in carrying out its responsibilities'.
- Economy is 'minimizing the cost of resources used for an activity, having regard to the appropriate quality'. Economy issues focus on the cost of the inputs and processes. Economy occurs where equal-quality resources are acquired at lower prices.
- Efficiency is 'the relationship between the outputs, in terms of goods, services or other results and the resources used to produce them'. Efficiency exists where the use of financial, human, physical and information resources is such that output is maximized for any given set of resource inputs, or input is minimized for any given quantity and quality of output.
- Effectiveness is 'the extent to which objectives are achieved and the relationship between the intended impact and the actual impact of an activity'.
- Effectiveness addresses the issue of whether the programme/activity has achieved its objectives.
- In Performance Audit it is seen that Government programmes have achieved the desired objectives at lowest cost and given the intended benefits.
- A Performance Audit is an objective and systematic examination of evidence for the purpose of providing an independent assessment of the performance of a government organisation, programme, activity, or function in order to provide information to improve public accountability and facilitate decision-making by parties with

responsibility to oversee or initiate corrective action.

**Performance Audit includes economy and efficiency and programme audit.**

- **a.** Economy and efficiency audit includes determining (1) whether the entity is acquiring, protecting, and using its resources (such as personnel, property, and space) economically and efficiently, (2) the causes of inefficiencies or uneconomical practices, and (3) whether the entity has complied with laws and regulations on matters of economy and efficiency.
- **b.** Programme audit includes determining (1) the extent to which the desired results or benefits established by the legislature or other authorizing body are being achieved, (2) the effectiveness of organisations, programmes, activities, or functions, and (3) whether the entity has complied with significant laws and regulations applicable to the programme.

**Economy and efficiency audits may, for example, consider whether the entity**

- is following sound procurement practices;
- is acquiring the appropriate type, quality, and amount of resources at an appropriate cost;
- is properly protecting and maintaining its resources;
- is avoiding duplication of effort by employees and work that serves little or no purpose;
- is avoiding idleness and overstaffing;
- is using efficient operating procedures;
- is using the optimum amount of resources (staff, equipment, and facilities) in producing or delivering the appropriate quantity and quality of goods or services in a timely manner;
- is complying with requirements of laws and regulations that could significantly affect the acquisition, protection, and use of the entity's resources;
- has an adequate management control system for measuring, reporting, and monitoring a programme's economy and efficiency; and

- has reported measures of economy and efficiency that are valid and reliable.

**Programme audits<sup>2</sup> may, for example**

- assess whether the objectives of a new, or ongoing programme are proper, suitable, or relevant;
- determine the extent to which a programme achieves a desired level of programme results;
- assess the effectiveness of the programme and/or of individual programme components;
- identify factors inhibiting satisfactory performance;
- determine whether management has considered alternatives for carrying out the programme that might yield desired results more effectively or at a lower cost;
- determine whether the programme complements, duplicates, overlaps, or conflicts with other related programmes;
- identify ways of making programmes work better;
- assess compliance with laws and regulations applicable to the programme;
- assess the adequacy of the management control system for measuring, reporting, and monitoring a programme's effectiveness; and
- determine whether management has reported measures of programme effectiveness that are valid and reliable.
- Performance auditing is an independent assessment or examination of the extent to which an entity, programme or organisation operates efficiently and effectively, with due regard to economy.
- In practice, there can be an overlap between regularity and Performance Audit, and in such cases, classification of a particular audit will depend on the primary purpose of that audit. Regularity audit embraces attestation of financial accountability involving expression of opinion on financial statements, audit of financial systems and transactions, including an evaluation of compliance with applicable statutes and regulations, audit of internal control and internal audit functions and audit of probity and propriety of

<sup>2</sup> These audits may apply to services, activities, and functions as well as programmes.

administrative decisions taken within the audited entity.

### **Performance Audit Guidelines**

- Performance Audit in Supreme Audit Institution (SAI), India is being undertaken following 'Performance Auditing Guidelines' framed in May 2004. These guidelines contain a framework for the entire process of performance auditing within SAI India. They provide the best practices that the SAI must follow in planning, implementing, reporting, follow-up processes and quality assurance in all Performance Audits. They outline consistent principles, objectives, approach, methodology, techniques and procedures for Performance Audits. These guidelines are based on the existing guidelines of SAI India, ASOSAI Performance Auditing Guidelines and INTOSAI Exposure Draft Implementation Guidelines for Performance Auditing Standards, besides other SAI's Best Practices and have been developed with the objective of ensuring consistency with the International Best Practices, as far as applicable in the Indian context.
- These guidelines replaced Chapter 8 of the Manual of Standing Orders (Audit), in the context of Performance auditing in SAI India.

### **Historical perspective of Performance Auditing in SAI India**

- SAI India has been carrying out Performance Audits over the past 40 years on a variety of subjects across all sectors of public sector programmes in the Central and the State Governments. The audit, hitherto variously termed as 'review' or 'efficiency-cum-performance audit' or 'value for money audit', was being conducted following provisions contained in Chapter 8 of Comptroller and Auditor General's Manual of Standing Orders (Audit)-second edition. In that sense, these guidelines do not intend to introduce any new practice within the SAI India, but are intended to consolidate the various instructions and guidelines in a single volume in a structured form and in the process, to also align the performance auditing by SAI India with the International Organization of Supreme Audit Institutions (INTOSAI) and the

Asian Organisation of Supreme Audit Institutions (ASOSAI) guidelines, and with the SAI best practices globally.

- These guidelines are the culmination of the desire within SAI India to consolidate the standards, principles and practices and codify them for uniform application in all performance audits.

### **Mandate for Performance Audit**

- The mandate of SAI India for audit is derived from the Constitution of India, as established under the Comptroller and Auditor General's (Duties, Powers and Conditions of Service), Act 1971. The mandate of C&AG of India for Performance Audit is governed under Sections 13, 14, 15, 16, 17, 19 and 20, as the case may be, read with Section 23 of the Act.
- Initially there was confusion in different Government departments about whether Performance Audit falls within the scope of audit by C & AG under the C & AG's (Duties, Powers and Condition of Service Act, 1971). Subsequently Ministry of Finance, Department of Economic Affairs (Budget Division) vide OM No. F.No.6 (5)-B(R)/99 of 13 June 2006 accepted and clarified that the scope of Audit by C&AG includes Performance Audit.

### **Organisational structure At Head Quarters:**

**(Source: Performance Audit Guidelines 14<sup>th</sup> May, 2004)**

- Director General (Performance Audit) deals with all the principles of Performance Audit in the Department and suggests necessary modifications to the standing orders where necessary. He deals with policy and legal issues as well as research and development aspects relating to Performance Audit (excluding IT Audit) besides functioning as Member Secretary of the Coordination Committee on Performance Audit Management and Review. He provides technical guidance and support in all matters relating to Performance Audit. He is assisted by Director (PA).
- In respect of the Performance Audit Reviews relating to Railways, he is associated by Deputy Comptroller and Auditor General

(DAI) in the process of selection of topics, as well as at the time of finalising the Study Design Matrix and Issue Analysis, in order to ensure that these comply with the Performance Audit Guidelines.

- As regards Railway Audit Wing in Headquarters office, the Director (Railway Board Audit) is the Group Officer for carrying out the performance audit at Railway Board and coordinating officer for the performance audits conducted by Zonal Railways. He/She works under direct supervision of PD (Railways).

### **At Zonal Level:**

- A Group Officer is responsible for supervision of performance audits. A core group consisting of AAOs/ SOs and headed by a Sr. Audit Officer is placed under the Group Officer (Performance Audit). The core group works as a nodal agency for carrying out the performance audit over the Zonal Railway and is responsible for ensuring observance of all procedures outlined in the performance auditing guidelines by the officers and staff undertaking Performance Audit at field level.

### **Performance Audit conducted by Zonal Railways**

Reviews on the basis of the new Performance Audit Guidelines started in the Railways from the year 2005-06.

Two types of Performance Review are conducted in Zonal Railways-

- Local Review conducted under PA Guidelines for an independent evaluation of any issue of relevance to Zonal Railway, and
- Centrally Coordinated Review under PA Guidelines on topics of common relevance to all Zonal Railways.
- The present system of selection of topics for local and central reviews is as under-
  - Well before the commencement of a new audit cycle, suggestion is sought by Headquarters on topics for next years' local and central reviews. The suggestion should accompany detailed justification (write-up) for the selection of topics according to the procedures laid down in Chapter 2 of the Performance Auditing guidelines. Greater thrust is given on selection of subjects based

on transparent risk assessment. Topics having (i) public interest (i.e. people centric)/core governance subject, (ii) concurrent or early stage audit of policy shift/sunrise issues and (iii) link with the working of the Railway as a commercial organisation and / or having an impact on operating efficiency and profitability of Indian Railways are selected. While suggesting topics Para nos. 2.5 and 2.11 of the Performance Auditing guidelines are kept in view. A standard format (Background Notes) has been adopted for providing necessary justification for selection of topics (Local Reviews by Zonal Railways and Central Reviews by Head Quarters).

- [N.B. - A five year Action Plan (2003-2008) with local review topics was prepared by PDAs and approved by Deputy Comptroller and Auditor General in 2003. Subsequently Headquarters instructed to revisit the already selected topics of local reviews in view of radical shift in the norms for selection of topics following introduction of Performance Auditing guidelines and change the topics, if necessary.]

### **Standard format for furnishing information**

#### **Understanding the entity and its environment**

- Basic information regarding the organisation- organisation structure
- Manpower- sanctioned strength and deployment
- Functions and objectives of the organisation
- Budget and expenditure
- Targets and performance
- Volume and value of the contracts handled
- Volume and value of Stores procurement
- Capital Assets
- Any other relevant information

**Risk analysis-** Risk analysis of the areas of check should be done against the following parameters for assessing the risk:

- Financial Materiality
- Significance of the topic
- Visibility of the subject
- Auditability, findings of past performance and regularity audit may also be detailed

- Objectives, scope and areas of coverage
- Expected outcome
- Estimated impact of expected outcome
- Tentative planning and time schedule
- List of documents to be relied upon

### **Factors guiding selection of subject:**

#### **Risk**

- It is important to identify and analyse the risks associated with the entities under audit jurisdiction. Risk is the exposure to the chances of failure or loss. The risk is related to the probability that an event or action will adversely affect the entity. In the context of Performance Audit, it is the risk to delivery of an activity / scheme / programme of the entity with economy, efficiency, effectiveness. Performance Audit provides assurance on performance of the public sector activity/scheme/programme.
- Once the subject is chosen; further risk assessment of the audit areas / issues within the topic helps focus on key issues in the individual audit. Some considerations are:
  - Financial materiality of a topic is the amount of expenditure/ revenue, assets/liabilities involved in the entity/project/ activity under review;
  - Significance of a topic is its importance in the context of the organisation, programme or subject. A topic will have a high significance if the project or activity it addresses is central to the functioning of the entity;
  - *Visibility* of a subject is an assessment of the interest it generates in the general public and of the legislature. While no uniform index of visibility can be prescribed, legislative debates, media reports/articles and subjects of workshops and seminars could serve as an index of visibility;
  - *Past performance* audits as well as regularity audits by the SAI could provide an index of significance, materiality and risk of the subjects;
  - *Estimated impact* of the Performance Audit is also a criterion for prioritisation. This could be the impact of improved economy, efficiency, and effectiveness of the entity/project/ activity under review. Impact can be assessed through an understanding of

the entity's risk profile and the areas proposed to be addressed by the topic.

#### **Performance Audit plan**

- Performance Audit implementation plan is like the detailed design of architecture of a building, wherein every possible detail of inputs, processing, sequencing, quality, testing etc. are determined before proceeding to actual construction. Like the design of the architect, where the structure of the building is visible right at the beginning, in-depth detailed planning and its documentation in the form of Performance Audit implementation guidelines should enable the Principal Director see through the entire process and the final output.

#### **Understanding the programme, subject, the entity and the environment**

(Source: Performance Audit Guidelines 14<sup>th</sup> May, 2004)

The planning steps are as follows-

- Collection of information about the audited entity and its organisation in order to assess risk and to determine materiality;
- Defining the objective and scope of the audit;
- Undertaking preliminary analysis/study to determine the approach to be adopted and the nature and extent of the enquiries to be made later;
- To develop a sound understanding of the subject of audit, the documents and information to be relied upon are to be identified and gone through. This will help in identifying the key audit issues;
- Understanding the entity environment, legislation, regulations and rules applicable to the entity, structure of the organisation and delineation of duties and responsibilities within it, work and information flow, internal control system and accountability relationships, etc.
- Presentation by/discussion with entity to facilitate better understanding of the programme/subject.

## Setting the audit objective

The most important stage in the Performance Audit process is defining the audit objectives. These are the basic audit questions that Performance Auditors seek answers to. Audit objectives, in effect, connect to the very reasons for conducting the audit and should be established early in the audit process to assist in identifying the matters to be audited and reported. Audit objectives are usually expressed in terms of questions about performance i.e., achievement of economy, efficiency and effectiveness of an entity/programme/activity under audit. The audit objectives define the nature of the audit, govern its conduct and the Performance Auditor reaches conclusions in the context of the audit objectives. The audit objectives, announce the reasons for conducting the Performance Audit (what is intended to be verified/assessed?)

Audit objectives are the pivot of any Performance Audit around which the entire exercise revolves. Audit objectives and sub-objectives should be stated in complete statement form with reference to the policy and programme objectives. Rather than defining the audit objectives in one running sentence, these should be split into several themes and sub-themes consistent with the objectives of the entity/programme, and all considerations connected with economy, efficiency, and effectiveness of the programme.

The audit objectives are set in assessment/verification mode for which the answer cannot, in most cases, be given in straight 'yes' or 'no'? This would imply that audit objectives will generally not be set beginning with 'Was, did, etc.' but with 'To assess if' or 'To verify whether' etc.

The audit objectives are stated distinctly/separately for each of the major

audit thrust areas and not stated in a mixed-up manner.

The audit objectives are stated in specific manner defining economy, efficiency or effectiveness in terms of the contextual specific parameters rather than being stated ambiguously or in general terms as "whether the programme was executed economically, efficiently and effectively"?

The audit objectives are stated in order of their significance and in a modular/hierarchical fashion, wherein the lower levels support the higher-level audit objectives, as far as possible and applicable.

## Analyzing Issues

Issue analysis is a structured approach that enables the Performance Auditors make an assessment of the performance with the help of answers to as many questions as possible relating to each audit objective. The objectives behind issue analysis are to (i) convert the audit objectives, which address broad/major issues for assessment of performance into smaller units of issues and sub-issues (questions) that must be answered with certain degree of confidence, (ii) frame questions on audit objectives, the answers to which are easy to find and (iii) break down the issues (questions) up to the level, where as far as possible a unique criteria can be applied for audit testing. It is with these purposes in view that an audit objective is divided into more than one issue and each issue may have to be divided into several sub-issues. The answers to the issues and sub issues, which are essentially developed from hypothesis about that issue with help of criteria, will generate evidence for proving or refuting the hypothesis. It is important to find definite answers to the lowest level questions to enable convincing and clear assessment of performance.

Issue analysis is a field audit procedure and unlike the audit objectives, need not necessarily be shared with the entity. However, quite often it may be unavoidable to share them with the entity in the context of securing their agreement to the criteria used for audit test programmes on various questions, **without having to share the entire study design with them.**

### Preparing Study Design Matrix

- Study design is the methodology to find answers to the lowest levels of questions developed as a result of issue analysis. The answers are found with the help of audit test programmes consisting of the test of the hypothesis behind the question with the help of a comparison between the *expectation/criteria (what should be)* with the *observation (what is)*. For comparison against the norm, one or more criterion has to be adopted or determined for each test. The test is carried out against the criteria with the help of the observed data, which implies that proper set of data have to be gathered to generate evidence in support or against the hypothesis behind each question and finally in support of audit conclusions.
- **Study design matrix** is framed to facilitate audit tests back-to-back against each of the lowest level issues/sub-issues/sub-sub issues with reference to the criteria and observed data to generate evidence.
- **Criteria** for each question should be determined to benchmark the observed data against them.
- The **sources** from where data will be collected needs to be clearly identified and detailed.
- The **methods** of data collection are to be identified and recorded.
- The units and sub-units where data will be collected from are to be identified on the basis of appropriate **sampling techniques**.
- The extent (number in terms of sample sizes) of the data (e.g. vouchers, beneficiaries, attendance data, etc.) is to be identified and details indicated.
- While determining the sample methodology and sample size, it has to be kept

in view that the **evidence** generated from the data will have to fulfill the standards of **relevance, competence and above all sufficiency.**

### Setting Criteria

- Audit criteria are reasonable and attainable standards of performance against which economy, efficiency and effectiveness of programmes and activities can be assessed. They represent good practice - a reasonable and informed person's expectation of '*what should be*'.
  - When criteria are compared with what actually exists (*what is*) audit findings are generated. Meeting or exceeding the criteria might indicate the 'best practice', but failing to meet the criteria would suggest that improvements could be made.
  - Suitable criteria should have *Reliability, objectivity, usefulness, understandability, comparability, completeness, acceptability*.
  - Criteria for various audit tests against issues and sub-issues are to be determined by auditors, all or some of which could be imported from those set by the entity/laws/rules. Where such applicable and relevant criteria are not readily available to adopt for audit testing, Performance Auditors have no option but to develop acceptable criteria for audit testing.
  - Criteria set against each of the lowest levels of questions/issues represent a unique quantitative or qualitative standard, which are measurable/ assessable.

### Pilot Study/Preliminary Survey

- Pilot study is conducted in one or two representative units of the entity to assist the Performance Auditors in refining the risk analysis, audit objectives, issue analysis, audit criteria, audit approach and audit test programme.

### Approval and intimation of review topics by Headquarters

[Source: Performance Audit Guidelines as available in C & AG's exchange folder (26.10.2007)]

- The Headquarters intimate the Pr DAs of Zonal Railways the topics selected for reviews after approval by the Deputy C&AG. In case of Central Reviews, Headquarters nominate the

PDA's of Zonal Railways to conduct pilot study on the subjects selected, prepare issue analysis, identify criteria for the issues and prepare Study Design Matrix as required under PA guidelines. While intimating the review topics Headquarters enclose the background papers giving issues involved, audit objectives, materiality, significance and relevance of the topics, expected outcomes and value addition on the topics. In addition, the copies of studies, reports and papers reviewed at Railway Board while preparing the background papers on the topics are sent for the benefit of the PDA's conducting Pilot Studies. The nominated PDA's after completing the above work, forward the same to Headquarters for further processing and preparation of guidelines.

### **Workshop on Review topics at Headquarters**

- A workshop with PDA's on the central review topics and other quality issues are organised thereafter at Headquarters. Representatives from Railways and other stakeholders are invited in the workshop to present their views and share their concerns with audit for the purpose of goal matching. The inputs from these workshops may be used for further refinement of issues and criteria developed by the field offices conducting pilot study.

### **Central Review guidelines**

- After refinement, Headquarters send Performance Auditing guidelines in respect of Central reviews to field offices and set target dates for sending review note along with filled in Annexures. The guidelines consist of guidelines-proper (containing introduction, organisational structure, audit objectives, audit scope & methodology, sample size and details of probable audit findings); annexures for data input, issue analysis, study design matrix and a flow chart identifying risk areas. Afterwards the guidelines, annexures etc are further refined / modified on the basis of discussion in a workshop held at Headquarters.

### **Midterm Workshop on Central Review**

- A midterm workshop on each central review topic is held separately at Headquarters or at nominated field office to discuss the progress of the review and constraints faced by

field offices. Officers associated with the Review make a presentation on the progress made by his/her team. On the basis of the presentation and discussion in the workshop further modifications to the guidelines and annexures are made, if felt necessary.

### **Implementation of Performance Audit Audit Engagement**

- Before initiating the audit, the Principal Director of Audit sends an engagement letter to the entity chief, communicating the launch of audit along with the entity units tentatively selected for audit and the time-frame for audit and request him/her to issue necessary directions to the functional officers and field units to provide documents and information to the audit team.

### **Entry Conference**

- An entry conference is held by the PDA with the chief of the entity before the audit process starts. The entry conference affords an opportunity for audit to explain to the entity the audit plan consisting of the audit objectives, approach and time frame besides appraising the entity of the data, information and documents that will be required by the audit team. The working procedures for audit may also be established in this meeting. Audit may also utilise this occasion to request the chief of the entity to provide assistance to the team by way of office accommodation, access to office equipment, etc. It is useful to make a request for the entry conference in the audit engagement letter itself to enable the chief of the entity to set aside appropriate time on the very first day of the audit and inform the department heads in time. The entry conference should be followed by a brief minutes of the proceedings.

### **Collection of information/data and developing audit findings**

- During the course of audit, information and data as required under the guidelines are collected by going through auditee's records/documents. Where information can not be derived from auditee's records by auditors, the same are obtained by making reference to the auditee. However, information so obtained, to become reliable



evidence, needs to be corroborated from other sources.

- Audit findings are developed by comparing audit evidence (i.e. what is) with audit criteria (i.e. what should be). Audit observation should be drawn in a modular fashion, containing the audit findings, conclusions and recommendations (where applicable) along with details of evidence, their sources and analysis.

### Exit Conference

The audit process concludes with exit conference with the entity. The Group supervisory officer or the PDA leads the team for SAI side in the exit conference depending upon the level of the entity. Generally, the Principal Director of Audit holds the Exit as well as the Entry Conference with the General Manager of the Zonal Railway in presence of the concerned Departmental Heads and FA&CAO. All audit observations must be issued to the entity at least one or two days before the scheduled Exit Conference. The exit conference is an opportunity for the entity to discuss the audit findings with the SAI representatives. This also affords opportunity to the Audit Officer/Group supervisory officer to clarify any point of doubt that the entity may like to raise. The minutes of Exit Conference should be recorded and endorsed to the entity.

### Draft Performance Review Note

- A draft Performance Review Note / Report is prepared on the basis of discussion in the exit conference and written replies, if any, received from the entity. The draft review note is then issued to the entity and sent to Headquarters for necessary action at their end.
- The Review Note/Report should be self contained and arranged in a logical manner so that a reader is able to understand the scope, audit objectives, audit criteria, evidence used, audit findings and conclusions. The presentation and language of the Performance Audit report should abide by the 'style guide' of SAI India. The essence of the style guide is to adopt uniform format and language, render the report simple and reader friendly as well as interesting.

## Compilation of Central Reviews and issue of report to Railway Board

- On getting the review notes and filled in Annexure from field offices, compilation is done at Headquarters. The facts and figures of the compiled Review Note/Report and the relevant Annexure are then got verified by the field offices. The Review Note is discussed with the Chairman, Railway Board and other members in the exit conference and issued to the Ministry of Railways.

### Structure of the report

The Performance Audit report should be presented as per the following structure:

- *Title*: The subject of the Performance Audit,
- *Highlights*: containing major audit findings either in the sequence of their materiality or in the same sequence as the audit objectives and sub-objectives;
- *Gist of recommendations*: While recommendation may be included at various places in the report in different contexts, all major recommendations should be presented together, immediately after the highlights, preferably, in a box or highlighted print.
- *Introduction*: consisting of a brief description of the subject of study, information on programme/activity /institution, its objectives, inputs, implementation structure, expected outputs and outcome, etc. The introduction should be brief, yet sufficient to enable the reader understand the context of the programme;
- *Scope of audit*: Scope of Performance Audit in terms of the period of the programme covered in audit and segments of the programme audited should be set out precisely;
- *Audit objectives*: The Audit objectives should be stated in simple and clear terms. *It is useful to set out the audit objectives and sub-objectives within each audit objective in the form of complete statement/question*;
- *Audit methodology*: Methodology used for data collection/evidence gathering and testing may be stated in brief. This adds to the acceptability of the audit findings and forms a statement for transparency of the audit procedure;

- *Audit findings:* in respect of economy, efficiency and effectiveness should be presented in a logical manner, preferably in the same order as the statement of the audit objectives. *Conclusions, recommendations and impact (outcome) analysis* with reference to each audit objective should be stated, preferably immediately following the audit findings. Audit findings may be illustrated with the use of graphs and charts to improve the visibility of the analysis and findings. Photographs can be used as evidence where they are able to corroborate evidence. The result of joint inspections and sample survey, if any, should also be included.

**Evidence:**

- *Size of the sample audited should be consistent while adducing evidence for audit findings with reference to an audit objective;*
- *Evidence needs to be prima facie competent, relevant, sufficient and reliable to support the audit finding. Conclusions are consistent with the audit evidence;*
- *Methods of obtaining evidence should be mentioned; and Evidence should be strongly persuasive.*

**Acknowledgement:** indicating or acknowledging in brief the co-operation, acceptance of the criteria/findings and recommendations by the entity. In case the co-operation or response was not forthcoming at any stage it may be indicated if it has resulted in any limitation along with its implication and the special

efforts made by audit to seek cooperation or response. Care should be taken to state them as a matter of fact rather than giving an impression to convey any accusation.

**Conclusion:** The result of audit should be stated in brief.

**Glossary of terms:** explaining all technical and uncommon terms used in the report that need to be explained.

**References or bibliography:** containing reference to all published material utilised in developing the report.

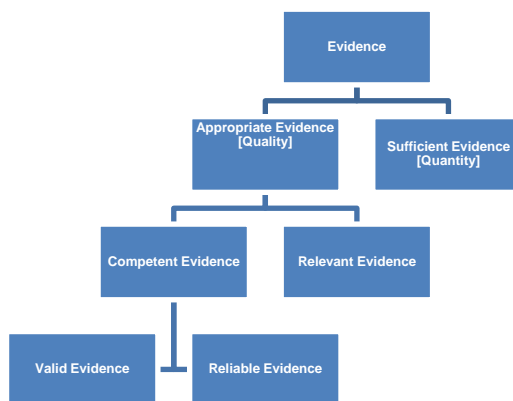
**Language of the Report:**

- Adherence to style guide should be ensured throughout;
- The report is to be presented in 'active voice' as far as possible; and
- The report is not too technical and is understandable by a common reader. Where necessary, technical terms have been explained in the glossary or in text boxes within the body of the report.

**Assurance for adherence to the Guidelines**

The field offices will submit a report in the following format indicating adherence to some of the more important provisions of the Performance Auditing guidelines. It is sufficient to indicate the reference numbers of the working papers, rather than actually sending a copy. This will provide an assurance of adherence to the Guidelines.

**Evidence, Documentation and Sampling technique – a short revisit.**  
**Diagrammatic representation of broad classification of evidence**



## Evidence

Audit evidence is the information collected and used to support audit findings. The conclusions and recommendations in the audit report stand on the basis of evidence. It is, therefore, important that the nature, quality and amount of evidence collected should satisfy the criteria for audit evidence. The evidence should be competent, relevant and reasonable and as direct as possible. It is also important that the data collection and sampling techniques are carefully chosen. The auditors should have a sound understanding of techniques and procedures such as inspection, observation, enquiry and confirmation, to collect audit evidence.

### **Competence, relevance and sufficiency of evidence**

#### **Competence:**

Evidence is competent when it is valid and reliable. Reliable evidence encompasses-

- An evidence corroborated by evidence obtained from other sources;
- Documentary evidence rather than oral evidence;
- Evidence obtained through direct observation rather than indirect observation;
- Entity generated information if the internal control system of the entity is reliable;
- Oral evidence corroborated in writing;
- Photocopies, if the source of photocopies is identified, source noted and certified;
- Evidence accepted by the entity.

## Relevance

- An evidence is relevant if it bears a clear and logical relationship to audit objectives and to the criteria.

### **Sufficiency or Reasonableness**

- Sufficiency is a measure of quantity of audit evidence. Evidence is sufficient if the test is carried out on a reasonable representative sample selected objectively.

### **Factors affecting the evidence**

Some factors that affect the competence, relevance and sufficiency of the evidence are:

- Samples selected are not representative (*sufficiency*);
- Evidence collected relate to an isolated occurrence (*sufficiency, validity*);
- Evidence is incomplete and does not establish a cause and effect relationship (*reliability, sufficiency*);
- Evidence is conflicting (*reliability*);
- Evidence is biased (*reliability*).

### **Types of evidence**

Evidence is categorised with reference to their type as physical, oral, documentary or analytical.

- *Physical evidence* is obtained by observing: photographs, charts, maps, graphs or other pictorial representations, *etc.* It is desirable to corroborate physical evidence, by the acceptance of the entity.
- *Oral evidence* is the statement in response to audit inquiries or interviews. It is essential to corroborate the oral evidence, if the oral evidence is itself to be used as primary evidence. The corroboration may be
  - by written confirmation by the person interviewed;

- by weight of multiple independent sources disclosing same facts;
- by checking the records later; or
- by entrusting the collection of evidence to independent organisations of repute.
- *Documentary evidence* is the most common form of evidence. These could be both internal as well as external. Some examples, of the evidence from external sources are tenders filed by vendors, invoices and documents originating from other agencies/entities (viz. notes/reports of other ministries, incoming correspondence, external evaluations and surveys) etc. Internal documentary evidence originates within the entity. Some examples of internal documentary evidence are accounting and information records, copies of outgoing correspondence, plans, budgets, annual reports, and internal audit reports etc.
- *Analytical evidence* stems from analysis and verification of data, which can involve computations, analysis of rates, trends and patterns, comparisons against standards and benchmarks, etc. The analysis and comparisons can be both numerical and non-numerical. The source of data analysed to develop evidence should be indicated to facilitate acceptance by the entity.

### **Sources of evidence**

- *Policy statements and legislations* - policy documents, operating guidelines and manuals, administrative orders etc. along with the background papers leading to this promulgation.
- *Published programme performance data* - budget, accounts including VLC outputs, plan documents, performance budgets and reports, programme documents, annual reports, replies or statements placed before Parliament and legislature.
- *Management reports and reviews* - internal reports and reviews minutes of meetings, management information chain and information/performance reports, etc.
- *Files of the entity on the subject* - provide strong evidence to support audit findings. Some of the more important files that can provide the desired evidence are:
  - Strategic and operational planning files;

- Budget files;
- Management control, monitoring and review files;
- Internal audit reports, internal and external evaluations; and
- Complaints and disputes, etc.
- *Databases* - maintained by the entity are important source of audit evidence.
- *External sources* - independent surveys, evaluation, research, etc.
- *SAI sources* – evidence collected in previous audits and during finalisation of strategic plan could provide evidence in many cases.
- *Auditors' observation* – could form an important source of evidence, particularly when supported and corroborated by photograph, video recording, etc. and attested by the representative of the entity.
- *Physical verification/inspection Reports.*

### **Sampling techniques**

In most Performance Audits, it may not be possible to examine all units or all data and documents due to time constraint. It will, therefore, be necessary that a representative sample be selected. The sampling techniques to be applied will depend upon the nature of data and audit objectives. The central issue in selection of the sample should be that:

- the sample selected is representative of the entire population and that audit findings on the sample apply to the entire population within the defined confidence limits;
- the sample is unbiased and each element of the population has an equal chance of appearing in the sample within the scope of the sampling method selected; and
- the sample size is sufficient to extrapolate the result of audit test to the entire population within the confidence levels.

## ***A case of Performance Review on “Freight and Wagon Management on Indian Railways”***

*(Source: Audit Report No.6 of 2007 [Railways])*

### **Highlights**

- Railways have permitted the running of trains loaded with enhanced quantity without complying with the conditions laid down for protecting track and rolling stock. Even after permitting loading of wagons with enhanced quantity, the trend of overloading continued. Increased incidence of rail fractures, weld fractures and defects in wagons and locomotives was seen.
- While rationalising the freight structure, the rates for eleven commodities were reduced by three to 54 per cent. Further, in respect of transportation of three of these commodities Edible Oils, Motor cars and Tea the decrease in rates resulted in even the haulage cost not being recovered.
- Non-provision of wagon load class for commodities placed in highest class has abolished the provision of charging higher freight in case of non-compliance with conditions laid down for availing the benefit of concessional train load rates. While the parties get the benefit of concessional rates even without compliance of all conditions, Railway has lost the operational benefits gained through bulk movement.
- Lowering of class of Petroleum products has not resulted in achieving the intended benefit of increasing the Railway's share of traffic. Instead earnings have decreased by 15 per cent in the year 2003-04 and 2.62 per cent in year 2004-05.
- The decision of the Railway to allow CONCOR to carry CC commodities in containers and recover haulage rates instead of Railway tariff rates has resulted in decrease in revenue of 43 to 73 per cent per wagon. In one year alone, Railway lost revenue of Rs.28.37 crore.
- Non-charging of freight for traffic carried by CONCOR, on the basis of the carrying capacity of the wagon has resulted in freight being recovered for less weight to the extent of 5 to 33 tonne per wagon. Railway has lost revenue of Rs.4.38 crore on this account during 2005-06 alone.
- Though wagon supply by PSUs was not as per target, orders for sizeable quantities were continued to be placed on them resulting in backlog of supplies and hampering Railway's procurement schedules.
- Wagons were detained at stations/sidings/exchange points/yards for want of adequate handling capacity. Railways suffered a total loss of earning of Rs.168.48 crore during the six month period from October 2005 to March 2006.
- There was underutilisation of BG wagons during transshipment of contents of MG wagons resulting in loss of Rs.5.63 crore.
- Wagons due for periodical overhauling underwent excess detention at various stages- before being sent for POH to the workshops, during POH in excess of the time allowed and after POH before being sent back for operational use. Detention due to these reasons resulted in loss of earning capacity of Rs.65.26 crore.

- Infrastructural facilities continued to be deficient resulting in detention and levy of demurrage. Further, Railways waived a major portion (56 per cent) of the levied demurrage thereby weakening the deterrent effect of imposition of such charges.

### **Gist of recommendations**

- Since loading of wagons beyond permitted axle load limits is likely to damage rolling stock as well as track, Railways should take urgent steps to complete the installation of weigh bridges at all the loading points as well as strengthening the monitoring mechanism as envisaged. Since the increase in permissible axle load reduces the leeway available no overloading whatsoever should be permitted as this would have serious impact on track.
- Railway Board may consider introduction of higher wagon load class rates for commodities placed in the highest class to ensure that benefit of train load rates cannot be availed without compliance of the conditions prescribed.
- In line with their original objective CONCOR should concentrate on piece meal traffic and not on bulk commodities. If bulk commodities have to be carried then the charges payable to the Railways should be commensurate with the Railway Tariff rules.
- Railway Board should consider placing orders for wagon production on those firms which are satisfactorily completing the production. Production of the wagons by the firms should be monitored on monthly basis and suitable action should be taken for non-adherence of production targets.
- The creation of additional facilities in consultation with the parties involved should become a priority area of action, since the wagons in most cases are detained for want of adequate facilities for handling.

### **Introduction**

Indian Railways play a crucial role in the social and economic development of the nation. With a vast network of 63,465 route kilometers, they are the principal mode of transportation for long haul freight movement in bulk. The Railways carried around 600 million tonne of freight during the year 2004-05 comprising 64 per cent of the total revenues earned by the railways. Railway transportation is a derived demand and is directly dependent on the growth of six major infrastructure industries in the country viz. electricity, coal, steel, crude petroleum, petroleum refinery products and cement, to which majority of railway customers belong. Over the years, the railways' share of the total transport share has come down from 53 percent in the IV Five-year plan to 37 per cent in the IX Five-year plan. The report of the working group on Railway programmes for the X Five-year plan lays down detailed freight operational and marketing strategies for achievement of projected freight targets. The achievement of these targets largely depends on the manner in which the Railways reshape their policies and strategies not only to regain the lost share in freight traffic but also to provide value for money to customers in terms of better facilities and improved services.

### **Organisational structure**

The Traffic Commercial directorate of Railway Board is responsible for the policy formulation on tariff and marketing strategies. The Traffic Transportation directorate monitors the movement of traffic of different commodities. The two directorates function under the overall control of Member Traffic. These directorates interact with trade representatives at regular intervals, identify high profit yielding commodities and monitor the freight business operations at the Ministry's level. At the Zonal Railway level, the freight business operations are looked after by Chief Commercial Manager, Chief Commercial Manager (Freight Marketing), Chief Operations Manager and Chief Freight Transport Manager. At the divisional level, the Sr. Divisional Commercial Manager is responsible for implementation of the policies and programmes.

### **Audit objectives**

- While the rationalisation of the freight structure was oriented towards simplification of the tariff, Audit intended to assess whether all the aspects of freight were considered adequately. The sub objectives would be to assess:-

- Whether the conditions laid down to ensure safety of rolling stock and track along with the running of freight trains with enhanced weight were observed.
- Whether reclassification of commodities earlier charged at minimum weight condition (MWC) was done after conducting thorough analysis of the freight that was earned and freight that would be earned after reclassification.
- Whether the impact of non-provision of separate wagon load class for commodities placed in the highest class was considered before doing so.
- Whether the intended objectives of retaining rail share of traffic in respect of POL items by lowering the highest class were achieved.
- Whether railways' tariff policy for carrying goods in CONCOR containers has achieved the intended benefits of capturing the piece meal traffic which the Railways had lost due to its policy of bulk movement.
- Whether the procurement of wagons was as per requirement and whether the Railways have provided adequate handling facilities at stations/ siding/ yards etc. to ensure optimum wagon utilisation and minimisation of detention on account of inadequate handling facilities.

### **Audit scope and methodology**

The impact of enhanced loading of wagons on iron ore routes and coal routes was reviewed over Central, Eastern, East Coast, Southern, South Western, South Central and South Eastern Railways. The impact of rationalisation of freight structure was reviewed on all Railways. In respect of CONCOR traffic the position was reviewed on all container depots.

The procurement of wagons was reviewed at the Railway Board and the position in respect of utilisation, maintenance and detention to wagons was reviewed at 18 goods sheds, 30 private and public sidings, 30 exchange yards and 13 workshops engaged in periodical overhauling of the wagons. The period of review was restricted to four years from 2002-03 to 2005-06.

### **Acknowledgement**

The audit plan including the audit objectives were discussed by Principal Directors of zonal railways in meeting with respective General Managers/Chief Commercial Managers/Financial Advisers and Chief Accounts Officers (FA&CAO) in the entry and exit conferences. The co-operation of the Ministry of Railways as well as zonal railways during the meetings and in the course of Audit is acknowledged. Audit recommendations were discussed by Deputy Comptroller and Auditor General with the Chairman Railway Board and other Board Members (December 2006).

### **Rationalisation of freight structure**

Over the years certain anomalies had crept into the freight structure due to ad hoc changes in the freight rates and Railways had felt the need for rationalisation. The Railways initiated the rationalisation of the freight structure from 2002-03 with the objective of simplification and to make rail traffic more competitive with other modes of transport and also to bring transparency in tariffs and rules. The main features of rationalisation as announced in various railway budgets are as follows:

(i) The goods carried are segregated into groups and freight is charged under classes assigned to each group of commodities. Rates are fixed for each class on the basis of distance carried. Though the freight rates during 2003-04 were not increased the number of classes was reduced to 27 and the highest class was lowered from 300 to 250. In order to make the rail freight rates competitive, the classification of certain selected commodities such as petroleum products, iron and steel, cement, clinker, soda ash etc. was reduced causing an overall reduction in freight rates ranging from 3.7 per cent for cement to 10.7 per cent for petroleum products.

(ii) All commodities, which did not have a notified trainload class meant for carrying freight in rakes, were assigned a trainload class, one stage lower than the wagonload class meant for carrying goods in individual wagons.

(iii) In 2005-06 the highest class was further reduced from 250 to 240. The freight classes in 'Fives' were abolished retaining a uniform interval of 'Tens' between the successive classes. Three new

special classes namely 90W1, 90W2 and 90W3 were introduced below class 90 for certain selected lightweight commodities. The total number of classes thus stands reduced from 27 to 19.

(iv) Further, all commodities were clubbed into 80 Groups and a single uniform class for the various commodities in the group was provided.

(v) The procedure of fixing 'minimum weight condition' (MWC) for light weight commodities which could not be loaded up to full carrying capacity of a wagon was abolished and a decision was taken to charge freight for weight equal to the carrying capacity of a wagon.

(vi) Commodities were assigned only trainload classes and if booked as wagon loads, the next higher class was to be applied.

Audit reviewed the financial and other impacts of implementation of various steps proposed in the rationalisation of freight structure. Its observations are given in the following paragraphs:

### **Impact of CC enhancement**

The carrying capacity of a wagon is based upon the load that the axles of the wagon can carry. Prior to November 2004, the wagons were allowed to be loaded upto CC+2 tonne where the permissible axle load was taken as 20.32 tonne. From November 2004 onwards, the loading was permitted upto CC+4+2 tonne. In May 2005, as a pilot project, Railway Board permitted running of these wagons loaded up to CC+8+2 tonne on sixteen identified iron ore routes in order to increase throughput. Subsequently, wagons loaded with coal up to CC+6+2 tonne were also allowed to run on nominated coal routes. The extra loading was, however, to be restricted up to a maximum axle load of 22.82 tonne. In all, 31 Iron Ore and 41 Coal routes were covered under the pilot project. Railway Board in March and May 2005 clarified that the enhanced loading may be permitted subject to:

- Installation of adequate number of Wheel Impact Load Detectors (WILD) on the zonal railways.
- Thorough physical examination of bridges, rehabilitation of distressed bridges, analysis of bridges for expected loading and installation of bridge load monitoring system.
- Instrumentation and evaluation of bridges by specialised agencies for increased longitudinal loads and higher axle loads.
- Ultra Sonic Flaw Detection testing at appropriate frequencies to detect rolling fatigue and also to assess the impact of enhanced loading on track and rolling stock.
- Installation of in motion weigh bridges to have a check on the overloading over and above the permitted enhanced loading.

The impact of enhanced loading on the track, bridges and rolling stock was to be monitored through quarterly progress reports for ensuring corrective action where required. Audit conducted a detailed review of eleven and six selected routes where enhanced loading of iron ore and coal respectively was permitted and noticed that:-

- In almost all the Railways, the pilot projects of permitting the wagons loaded up to CC+8+2 tonne and CC+6+2 tonne were commenced even without fulfilling the conditions of installation of in-motion weigh bridges and provision of Wheel Impact Load Detectors. As against the eleven in-motion weigh bridges to be installed on East Coast Railway, only one was installed so far (September 2006) despite notification of eight routes on this Railway. Similarly, on South Central Railway only five out of nine weighbridges were installed. The position of provision of Wheel Impact Load Detectors was even worse as none was provided on any of the Railways so far.
- Even after permitting wagons to be loaded with excess weight up to ten tonne on iron ore routes and eight tonne on coal routes, wagons on South Eastern, South Western, East Coast and Eastern Railways were found to be overloaded beyond these enhanced limits. The overloading beyond the enhanced limits was to the extent of one tonne to 5.70 tonne on an average. This has resulted in loading of wagons to the extent of 24.49 tonne per axle as against the permitted axle load of 22.82 tonne thereby exceeding the axle load limits by one tonne to 1.68 tonne per axle. Exceeding the axle load beyond permitted weight limits would lead not only to axle damages but also serious implications for the safe running of trains due to impact on track and rolling stock.
- The track structures on routes notified over Central and South Eastern Railways were found laid with mixed rails of 90R, 52 KG and 60 KG resulting in imposition of speed restriction of 30 kms per



hour. Thus the advantage of extra loading was likely to be nullified by extra time taken in transit.

- There was increase in rail fractures and weld fractures on Central and South Eastern Railways.
- Glued joint failures, Switch Expansion Joints and Points and Crossing failures were seen on almost all the routes.
- Though South Eastern Railway had identified 223 important and major bridges for monitoring, inspection on 40 such bridges had not been carried out so far (August 2006).
- South Eastern Railway had completed bridge instrumentation for measuring the impact of overloading only on one bridge and tenders for provision of the same on remaining twelve bridges were yet to be finalised.
- Though South Central Railway had identified thirteen bridges as distressed on these routes, rehabilitation of only one bridge was completed and the rehabilitation works on other bridges were in progress.
- The overloading of wagons caused increase in spring failures, Centre Buffer Couplers (CBC) failures and body damages. While the increase of spring failure on South Eastern Railway was 9.65 per cent, the same was 76.84 per cent on South Western Railway. Similarly the increase in CBC failure was to the extent of 11.87 per cent and 16.49 per cent on South Eastern and Southeast Central Railways respectively.
- As reported by Mechanical department, in addition to stalling of trains, failure of certain locomotive components such as Cylinder Heads, Brake Blocks, Dynamic Grid Separator and Element, Power Contactor Tip and CBC Knuckles had also increased.

Thus, though Railway Board has permitted increased loading by as much as six and eight tonne for coal and iron ore respectively, there would be an adverse impact on track, bridges and rolling stock unless the Railways take urgent action to upgrade the track and monitor the parameters closely. The adverse impact would be even more serious in case of overloading beyond permissible limits. Mere levy of penalty would not be adequate as the damage to track and rolling stock could be extremely costly.

Railway Board in their reply (December 2006) stated that CC enhancement was done on Indian Railways as a policy after a paradigm shift in the conceptual perception of design of track structures from deterministic to probabilistic. It was also stated that before allowing CC+ loading, a review of track as well as the rail and bridge stresses were carried out. As regards over loading of wagons even beyond enhanced limits, it was stated that they have initiated installation of over 100 weigh bridges to check the overloading. The reply of the Board is not acceptable because the enhanced loading of wagons was commenced without compliance of conditions laid down. Even one year after the commencement of the increased loading, the weigh bridges at most of the locations are still to be provided and the checks are not in place as evident from the overloading beyond the enhanced limits. This has resulted in overshooting the revised axle tolerance limits.

### **Recommendation**

Since loading of wagons beyond permitted axle load limits is likely to damage rolling stock as well as track, Railways should take urgent steps to complete the installation of weigh bridges at all the loading points and strengthening the monitoring mechanism as envisaged. Since the increase in permissible axle load reduces the leeway available, no overloading whatsoever should be permitted as this would have serious impact on track.

### **Incorrect rationale for fixation of lower classes in respect of certain commodities**

With effect from 1 April 2005, while rationalizing the freight structure, Railway Board abolished the concept of charging weight on the basis of MWC and introduced a system whereby all commodities were to be charged on the carrying capacity of the wagon used. However, in order to compensate for the increase in freight due to charging for weight not actually loaded in a wagon, the classification of certain commodities was lowered. Audit reviewed the impact of abolition of the concept of charging freight at MWC and found that -

- Although the traders were getting the benefit of carrying higher quantity within a fixed freight by

loading the wagons with more quantity than the MWC prescribed earlier, the Railway earnings per wagon were reduced by 54 per cent (turmeric) to three per cent (de-oiled cake) as compared with the freight that was realised at the pre-revised class prior to rationalisation. The overall financial impact of fixing the lower classes in respect of eleven commodities viz. Motor Car, Onion, De-oiled cake, Edible Oil, Timber, Paper, Tea, Milk Powder, Dry chillies, Turmeric and Cotton (full pressed) works out to a loss of Rs.21.93 crore in the year 2005-06 alone.

- It was also observed that the freight rates charged in respect of Edible oils, Motor Cars and Tea at class 90 W2 did not even cover the cost of operations (haulage cost) and Railways were incurring losses ranging from 13 per cent for a distance of 500 kms to 24 per cent for a distance of 2000 kms. The impact of fixation of lower class at higher distances was much more.

Railway Board in their reply (December 2006) stated that the rates adopted by audit for the purpose of calculation were not accurate. This reply is not acceptable since the rates have been calculated on the basis of the Goods Tariff as applicable from 1 April 2005. Moreover, the objection is to the policy changes which have resulted in a loss of revenue. In some cases even the cost of operations has not been recovered as brought out above.

### **Recommendation**

Railways being a commercial organisation, should fix the freight rates in such a manner that at least the cost of operations is recovered.

### **Non-provision of separate wagon load class for commodities placed at class 240**

With a view to achieving savings in operational costs, the Railway Board had introduced (January 1982) lower class for movement of traffic in train loads instead of piece meal wagon loads. Prior to 1 April 2005, all commodities were assigned separate classes when booked as train loads and wagon loads. However, with effect from 1 April 2005 commodities were assigned only train load class with the stipulation that when such commodities were to be booked as wagon loads the freight would be charged at the next higher class. There was no distinction of wagonload and trainload class however, for commodities placed in the highest class such as POL products. The conditions for availing the benefit of train load rates stipulate that the consignors have to indent and load a minimum number of wagons for a particular destination or a combination of two destinations. It also stipulates that benefit of train load rates would be applicable only if the consignor loaded all the wagons supplied. Moreover, the traffic has to be booked from and to a station notified for handling full rake loads. Where these conditions are not complied with, the freight for all wagons in a rake has to be charged at wagon load rates. These conditions were framed with a view to encourage the consignors to offer train load traffic only at those stations which have adequate facilities so that Railway's marshalling costs could be curtailed and also to encourage the traders to load all the wagons to avoid empty movement.

Audit reviewed the impact of non-provision of a separate wagon load class for commodities placed in the highest class and found that -

- Taking advantage of the fact that they would not be required to pay higher freight in case of non-compliance of conditions laid down for availing the benefit of train load class rates, the consignors were not loading all the wagons supplied to them. As a result of this anomaly in the rules freight in respect of rakes comprising 30,666 wagons where all the wagons were not loaded was charged at train load rates on eight zonal railways as no separate wagonload class was available.
- Similarly, when the commodities placed in the highest class were booked from stations/sidings not notified for handling rake load traffic, the Railways were forced to charge only train load rates as wagon load class rates were not prescribed. The number of wagons loaded with commodities placed in highest class by seven stations alone during 2005-06 was 22,148.
- Other commodities in similar circumstances earned higher freight of approximately five per cent. Using this as a guideline, the Railways have lost revenue of Rs.4 crore by not providing a separate wagonload class.

Railway Board may consider introduction of higher wagon load class rates for commodities placed in the highest class to ensure that benefit of train load rates cannot be availed without compliance with the conditions prescribed.

### **Impact of lowering the highest Class to 250 and 240**

In order to make transportation by rail more attractive as compared with other modes of transport, the classification of certain Petroleum products was lowered from class 280 to class 250 from 1 April 2003 and further to class 240 from 1 April 2005 resulting in an approximate reduction in freight rates by 10.7 per cent and four per cent respectively. The main objective of doing so was to avoid diversion of this traffic from rail to other modes of transport. An analysis of the total traffic moved by rail from 2002-03 to 2004-05 revealed that-

- Even after reducing the rates considerably, the Railway share of POL traffic reduced year after year while the share of other modes of transport particularly road kept increasing. In fact, the Railway's share of total POL traffic has come down from the level of 31 per cent in 2002-03 to 25 per cent in 2005-06 while the road share has increased from 14 per cent in 2002-03 to 23 per cent in 2005-06. This indicates that Railways were not able to retain their share of traffic even after lowering the rates.
- Correspondingly, the quantum of Petroleum products traffic moved by rail decreased by 14.08 and 6.03 per cent during 2003-04 and 2004-05 respectively as compared to the traffic carried in 2002-03. The consequent decrease in earnings was to the extent of 15.21 and 2.62 per cent respectively. Overall earnings during 2003-04 and 2004-05 thus decreased by Rs.419.10 crore and Rs.72.06 crore respectively as compared with the earnings of 2002-03 i.e. the year immediately preceding the year in which the reduction was effected.

Railway Board stated during discussions (December 2006) that rates were lowered in order to arrest the decreasing trend of POL traffic. However, as brought out above the strategy of lowering of rates has not helped in arresting the trend of decrease in Railway's share.

### **Concession in freight to North Eastern States**

The Freight Structure Committee had recommended (1955-57) grant of concession in freight for transporting commodities by rail to and from North Eastern region for a limited period for speedy development of Assam as after partition, traffic to most of these areas was to be carried by longer routes. Later the Rail Tariff Enquiry Committee also recommended (1977-80) concessions but insisted that the Government should bear the losses incurred by Railways. Railway Board, however, introduced a six per cent concession to traffic to and from stations located in Assam and other North Eastern States booked via Howrah without asking the Ministry of Finance whether the Government was ready to bear the losses. The matter on this account was taken up with the Ministry of Finance in November 1981 but the proposal was turned down stating that Railway should bear the losses on account of concessions, if any, granted. Subsequently from April 1983 concession of six per cent was extended to all traffic booked to and from stations to Assam and other North Eastern states. The objective was to enable speedy development of the Northeast. Railway's Freight and Fare Committee in 1993 had also deliberated on the matter of concession and opined that there was no justification in continuing this concession to NE States. However, no action was taken by Railway to withdraw the concession till January 2006 when their proposal of December 2005 for bearing the losses by Central Government was turned down yet again.

Thus, as a result of continuing with the provision of concession of 6 per cent in the freight despite repeated refusals from Ministry of Finance to bear the losses, Railways suffered a loss of Rs.740.40 crore during 1981-82 to 2004-05. The Railways were also not in a position to assess whether this concession had any significant impact on the economy of North Eastern States.

### **Indian Railways tariff policy for movement of CONCOR traffic**

Container Corporation of India (CONCOR) was set-up in 1989 with the sole objective of developing inter-modal transport services and an efficient and reliable infrastructure for the country's foreign trade as well as multi-modal logistics support for domestic trade and industry. CONCOR was also to undertake vital marketing functions as well as research for integrated logistics infrastructure for the country's trade, commerce and industry. This was primarily to serve as a complementary service of

the Railway especially to capture high rated and piecemeal traffic which had been abandoned by the Railways due to shift in their policy to move only bulk traffic offered in full train loads. Audit reviewed the policies set forth by Railway to allow CONCOR to carry certain commodities in containers and the charges recovered from them and found that -

### **Impact of allowing CONCOR to load bulk commodities**

In 1994, in view of the shortage of covered wagons, Railway Board permitted CONCOR to move all commodities. However, to ensure that Railway should not lose the traffic as well as their share of revenue, in respect of the commodities which were loadable up to full carrying capacity of wagons and were placed in the category where freight charges were recovered on the weight equal to the marked 'carrying capacity' (CC) of the wagon, CONCOR was required to book such commodities at Railway tariff rates and deposit the full freight with the Railway. For the services rendered by them, 18 per cent of the total freight so realised was paid to CONCOR.

However, keeping in view the fact that the number of CC commodities was very high and most of them were not offered even in full wagon loads, Railway Board short listed eleven commodities viz. Cement, Food grains, Iron and steel from steel plants including pig iron, Salt, Iron Ore, Sponge iron, Lime stone and dolomite, Gypsum, POL, Sugar and Coal and allowed CONCOR to load all except the short listed commodities in containers along with other commodities for which mixed category haulage rates were required to be paid to the Railways.

In 1999, the list of CC commodities was reduced to five and commodities i.e. cement, iron ore as well as pig iron, sugar, coal, lime stone and dolomite were permitted to be carried by CONCOR by paying mixed category haulage rates to Railways. In other words, commodities which were part of the regular traffic of the Railways and which should have earned freight at regular tariff were permitted to be carried by CONCOR at much lower rates.

Audit reviewed the financial impact of shifting them from CC category haulage rates to mixed category haulage rates and found that most of the CC commodities which were permitted to be carried by CONCOR in containers could have been conveniently carried in open wagons. Permitting CONCOR to carry CC commodities at mixed category haulage rates resulted in loss of revenue ranging from 49 per cent to 73 per cent per wagon.

Thus, the decision of Railway Board has not only resulted in loss of Rs.28.37 crore but also defeated the purpose of setting up of CONCOR as they, instead of capturing piece meal traffic lost by Railways have made inroads into Railways share of bulk traffic.

### **Non-compliance of Minimum Weight Condition**

As per the prevalent policy of the Railways, CC commodities such as Cement, Iron & Steel booked from steel plant sidings, POL and Grains & Pulses when carried in containers by CONCOR are to be charged according to rules prescribed in the Indian Railway Conference Association Goods tariff. As per provisions of the Goods tariff, the freight for all commodities is to be charged for the carrying capacity or enhanced carrying capacity of the wagons used.

A review of the traffic in respect of CC commodities booked by CONCOR in containers loaded on Railway owned as well as CONCOR owned wagons revealed that -

- Though the carrying capacity of the wagons used for carrying the containers was 48 tonnes and 60 tonnes, the Railways have recovered freight for the carrying capacity of the containers instead of carrying capacity of the wagons used. As the carrying capacity of a TEU (twenty feet equivalent unit) was 21.5 tonnes and only two TEUs can be loaded on a flat wagon, the freight recovered was for only 43 tonnes resulting in less recovery to the extent of 5 tonnes when wagons used was of 48 tonnes capacity and 17 tonnes when the wagon used was of 60 tonnes capacity.
- Similarly, the difference in weight on which freight was charged for a FEU (Forty feet equivalent unit) was to the extent of 21 and 33 tonnes when loaded on a wagon with carrying capacities of 48 tonnes and 60 tonnes respectively.
- Thus, due to non-observance of Goods Tariff rules in the case of traffic related to CONCOR, Railways have lost revenue of Rs.4.38 crore during the year 2005-06 alone.
- It was also observed that the carrying capacity of FEU was fixed on a very

low side. In fact volume of an FEU was almost double that of a TEU and the haulage charges recoverable for an FEU were also twice that of TEU but the carrying capacity of FEU was fixed at 1.3 times that of TEU. Thus fixation of lower CC has resulted in loss of revenue of Rs.0.50 crore during the year 2005-06 when loaded with CC commodities.

### Recommendation

In line with their original objective CONCOR should concentrate on piece meal traffic and not on bulk commodities. If bulk commodities have to be carried then the charges payable to the Railways should be commensurate with the Railway Tariff rules.

### Wagon management

The Wagon fleet of the Indian Railways plays an important role in the day to day freight operations of the Indian Railways. Its timely maintenance and optimal utilisation is essential for increasing revenue earnings. As on 31 March 2005, Indian Railway had a wagon fleet of around 4.61 lakh four wheeler units comprising covered, open high sided, open low sided and other types of wagons. Audit observed the following deficiencies in wagon procurement, utilisation, maintenance and measures adopted by Railway to curb detentions.

### Procurement of wagons

Wagon procurement for the use of Railways is centralised in Railway Board. Wagon acquisition is a need based activity which is dependent upon the traffic needs and availability of the funds after taking into consideration the replacement of wagons due for condemnation etc. Targets for acquisition of wagons for a particular year are fixed on the basis of traffic projections as intimated by Planning/Traffic Transportation directorate of the Railway Board. The process of procurement of wagons is taken care of by the Stores directorate of the Railway Board which functions under the control of Member Mechanical.

The entire procurement of wagons is made through open tenders. There are 12 companies operating in the country for manufacturing wagons. Six companies are in the public sector domain under the Department of Heavy Industries and six companies in the private sector. Besides, three Railway workshops are also manufacturing wagons.

The planning and procurement of wagons is normally done for a five year plan period based on traffic projections and replacement of wagons due for condemnation. Any revision if required is carried out during the mid term appraisal. While the entire procurement is made through open tendering system, Railways have been following a system of distribution of 75 per cent of the quantity against the tender amongst all the established suppliers, 60 percent of which is to PSUs and 40 per cent to private sector units as per the past performance and capacity of the firms. The remaining 25 per cent quantity is considered for ordering on competitive basis.

The target of acquisition of wagons fixed for the X plan period as indicated in the Plan Document was 65000 Four Wheeled Units. A summarised position of the quantity ordered during 2002-03 to 2005-06 on PSUs and the private sector wagon manufacturing unit is mentioned in the following table:

*(In four wheeled units)*

Particulars	Ordered quantity outstanding as on 1.4.2002	Quantity ordered during 02-03 to 05-06	Percentage to total quantity ordered	Quantity to be received during 02-03 to 05-06	Quantity received during 02-03 to 05-06	Orders pending as on 31.3.06
1	2	3	4	5	6	7
PSUs	2922.5	28122.5	41.65	31045	19717.5	11327.5
Private sector	2060	39397.5	58.35	41457.5	41457.5	0
<b>Total</b>	<b>4982.5</b>	<b>67520</b>		<b>72502.5</b>	<b>61175</b>	<b>11327.5</b>

Review of the quantity ordered and received during 2002-03 to 2005-06 revealed that -

- Although there was balance of 2922.5 Four Wheeled Units against the previous orders, Railway Board had placed further orders for supply of 28122.5 Four Wheeled Units (42 per cent of the total quantity) on PSUs. As against a total of 31045 Four Wheeled Units, PSUs supplied only 19717.5 Four Wheeled Units (64 per cent). Specific kinds of wagons such as BOBSN, BOSTHS,

BRHNEHS, BRNAHS and BBZI have not been supplied at all and there is a hundred per cent default against the supply of these wagons. Thus, the performance of the PSUs was below par as compared to the private sector suppliers.

- It was noticed that although M/S Bharat Wagon Engineering Co. Ltd (a PSU) had supplied only 477.5 four wheeled units (16 per cent) as against the ordered quantity of 2990 four wheeled units, the liquidated damages of Rs.1.17 crore recovered from the defaulting PSU were waived and refunded. Despite erratic supplies and huge arrears in production, the Railway Board froze the previous orders and placed fresh orders on the PSU for manufacture of 1540 four wheeled units in October 2004. Further an unadjusted advance of Rs.4.17 crore was allowed to remain with the firm without levy of interest.
- Despite the extension of such special benefits to the firm the supply against the fresh orders was also erratic as by the due date the firm had supplied only 485 four wheeled units (32 per cent). Thus the undue advantages in the shape of waiver of liquidated damages and carry forward of unadjusted advance have proved futile and were not justified.

Thus, the policy of favouring PSUs has worked against the best interests of the Railways leaving them with a shortage in a critical area of operations.

### **Recommendations**

Railway Board should consider placing orders for wagon production on those firms which are satisfactorily completing the production. Production of the wagons by the firms should be monitored on monthly basis and suitable action should be taken for non-adherence of production targets.

### **Wagon utilisation**

In order to maximise the utilisation of the available wagon fleet, it is imperative that wagons on arrival at stations are loaded/unloaded within the minimum time and dispatched to their destinations without unnecessary detention in stations/yards. The reasons for abnormal detentions should be critically reviewed and action taken to create additional facilities for removal of bottlenecks. Scrutiny of various records related to wagon utilisation maintained at stations/sidings/exchange yards etc. revealed the following:

### **Injudicious notification of stations/sidings for handling full rake traffic**

The Operating Department of the zonal railway notifies the stations, goods sheds and sidings for dealing with full and half rakes based on operational feasibility and local conditions prevailing on the zonal railways. Railway Board had issued instructions to zonal railways for notifying stations/sidings on their Railways which had full rake/half rake handling facilities so that booking of traffic in rake loads was done only from and to such notified stations. These instructions were reiterated in October 2004. The zonal railways were also asked to augment the capacity of sidings to handle full rakes wherever there was adequate traffic justification.

The action taken by zonal railways for implementation of the directions of the Railway Board issued in October 2004 was reviewed.

- A test check of two stations on each zonal railway notified for handling full rake load traffic revealed that 18 goods sheds on Central, Eastern, North Central, North Eastern, South Eastern, East Coast, Western, North Western, South Western, Southern, East Central Railways notified for handling full rakes did not have adequate facilities as a result of which the rakes handled on these stations suffered detention ranging upto 54 hours per rake during the six months period from October 2005 to March 2006. The total detention suffered by 1,46,028 wagons was equal to 96,420 wagon days resulting in loss of earning capacity of Rs.19.62 crore during these six months.
- Similarly, review of records of 27 sidings which had been notified as full rake handling points for booking of outward traffic revealed the sidings were also not actually capable of handling full rake traffic, as a result of which 11,717 rakes placed for loading in these sidings suffered a total detention of 1,64,289 days. There was a consequential loss of earning capacity of Rs.32.99 crore during the six months period from October 2005 to March 2006.
- Similar review of 26 sidings which were notified for handling full rake of inward traffic revealed that out of 15,55,030 wagons placed for unloading 11,22,342 wagons (72 per cent) suffered detention

of 3,06,317 days resulting in loss of earning capacity of Rs.62.11 crore during October 2005 to March 2006.

Thus, the notification of goods sheds and sidings for handling full rakes when they did not have adequate capacity and the failure of the zonal railways to create these has resulted in loss to the Railways to the extent of Rs.114.72 crore for a six month period alone.

### **Detention of wagons at exchange point/yards**

In order to ensure that available stock of wagons is utilised efficiently, it is imperative that wagons received in station yards for loading and unloading are immediately dispatched to destinations. Though the Railway Board had introduced long back the concept of direct placement and removal of wagons in sidings, a test check at 29 station yards/exchange points of different sidings revealed that out of 13,613 rakes loaded by parties and placed at the exchange points for onward dispatch, 11,704 rakes (86 per cent) were detained on various accounts such as non-availability of power, section clearance, nonavailability of crew and delay in train examination etc. These problems could have been overcome easily with better management by the zonal railways particularly the mechanical and operating departments. The total detention on these accounts during the six month period of October 2005 to March 2006, works out to 2,28,294 wagon days resulting in loss of earning capacity of Rs.53.76 crore. On Northern, South Central, North Central, South Western, Central, Eastern, North Western, Northeast Frontier and East Central Railways, one hundred per cent of the rakes underwent detention before being taken for loading.

### **Under utilisation of wagons at Trans-shipment Points**

When Railway has to carry goods from stations falling on Meter Gauge (MG) to stations falling on Broad Gauge (BG) or vice versa, they have to trans-ship the contents of MG wagons into BG wagons or vice versa. Since the wagons used on different gauges have different carrying capacities, the contents of one type of wagon cannot be adjusted in full into the other type of wagon. In order to make optimal utilisation of available capacity of wagons it is imperative that at the time of trans-shipment the contents of one type of wagons are transferred and loaded into other type of wagon to its full capacity and all the wagons in the rake are fully utilised. Audit scrutiny of records at four trans-shipment points over Western, Southern and Northeast Frontier Railways, however, revealed that contents of MG wagons were trans-shipped into BG wagons in such a manner that each BG wagon was underutilised to the extent of 5 tonne to 23 tonne. As a result, 3,516 BG wagons were underloaded to the extent of 64,465.3 tonne resulting in loss of earning capacity of Rs.5.63 crore on account of underutilisation of full capacity of the wagons. The loss could have been avoided by loading the BG wagons to their full carrying capacity thereby using a lesser number of BG wagons.

### **Wagon maintenance**

Regular and periodical maintenance/overhauling of wagons is necessary to keep them fit for traffic use. Railways undertake regular maintenance and periodical overhauling in a time bound manner and as per well laid down schedules at wagon sick lines and workshops. As mentioned in the Indian Railway year book (2004-05) there were arrears in periodical overhauling of BG wagons (5.8 per cent) and MG wagons (7.9 per cent). The review of the arrangements for sending the wagons for periodical overhauling, time taken by workshops in overhauling and removal of wagons turned out after overhauling revealed that -

- South Eastern, Western, South Central, North Central, Southern, West Central, North Western and Northeast Frontier Railways had not taken prompt action to send the wagons due for periodical overhauling to Workshops and these were detained at the yards. During the six month period from October 2005 to March 2006 alone 30,344 wagons due for periodical overhauling were stabled in the yards and sent to Workshops after a total delay of 1,34,591 days resulting in loss of earning capacity of Rs.27.39 crore.
- On receipt of wagons in the Workshops they could not be taken up for POH immediately due to capacity constraints and bunched supply. Though the detention on account of capacity constraints are genuine reasons and cannot be avoided, Railways could have avoided the bunched supply to minimise detentions.

- Further, most of the wagons undertaken for periodical overhauling were not turned out within the prescribed period. The reasons for delays in periodical overhauling were attributed to shortage of material and staff as well as requirement of more days due to heavy corrosion repairs requiring modifications, denting and painting etc. During the six month period from October 2005 to March 2006 alone the Workshops had taken 1,04,671 wagon days over and above the time allowed resulting in loss of earning capacity of Rs.21.30 crore. Despite the fact that there was a shortage of wagons in the Railway system, effective steps were not taken to minimise the time taken in periodical overhauling by ensuring timely supply of requisite material and staff etc.

- A scrutiny of records also revealed that wagons turned out after POH were not sent for traffic use immediately. During the six month period from October 2005 to March 2006 alone a large number of periodically overhauled wagons were allowed to remain without use for a total of 81,434 days causing loss of earning capacity of Rs.16.57 crore.

Railway Board stated that the detention to wagons prior to sending them for POH was because they have to wait for wagons to accumulate for forming a rake. It was also stated that excessive time taken in POH was on account of requirement of heavy repair in some cases. The reply is not acceptable because wagons due for POH were allowed to remain in yards for abnormally long periods. For instance, in the six month period reviewed, 440 wagons were sent to the Wagon Repair Shop, Guntapalli after delays ranging from 25 to 300 or more days. Similarly, in respect of 56 wagons, the workshop had taken excess time ranging from 25 to 100 days in POH as against the norms laid down by the Railways themselves. Thus, detaining wagons for such long periods is neither economical nor conforming to the instructions in force.

### **Adequacy of measures prescribed in rules for curbing detentions and their implementation**

Avoidance of unnecessary detentions to wagons reduces the interval between two successive loading operations of the wagons, helping the Railways move more goods traffic given the same number of wagons. Demurrage charges are levied on the parties if they fail to load/unload the wagons within the prescribed time. The sole object of levying demurrage charges is to discourage the detention and improve the turn round of wagons. A review in audit to ascertain whether the existing rules were sufficient to curb the tendency of detaining wagons over and above the time allowed for loading/unloading and to see if there was scope for improvement revealed that -

- The Railway Fare and Freight Committee's observation (1993) that demurrage rates should be fixed in a manner so that they fully compensate for the loss suffered by Railway on account of detention. A review of the rates fixed from time to time during the last three years revealed that they were by and large far less than the earning capacity of the wagons. The rates exceeded the earning capacity only for about a ten month period from February 2005 to December 2005 and that too for detention of two days and more. Since most of the wagons were detained upto two days, even the impact of fixation of rates more than the earning capacity was almost negligible.

- However, in January 2006, the rates were further decreased and a uniform rate irrespective of the quantum of detentions was adopted, equivalent to only 44 per cent of the earning capacity. Thus, the demurrage rates were fixed at such levels that would neither serve as a deterrent to the parties nor adequately compensate the Railways for the loss of earning capacity. Moreover, a uniform rate irrespective of period of detention does not serve as an adequate disincentive to the parties to release the wagons at the earliest.

- The loss of earning capacity due to fixation of such low demurrage rates at less than the earning capacity amounted to Rs.1581.17 crore during the three year period from 2003-04 to 2005-06.

- Moreover, even this levy of demurrage charges were not realised in full. A test check of 60 sidings revealed that out of a total amount of Rs.167.40 crore accrued during the three years 2003-04 to 2005-06 (as recoverable from public as well as private sidings) Rs.94.07 crore was waived. While the percentage of waiver in respect of private sidings was 49 per cent, the waiver in respect of public sidings was to the extent of 60 per cent. Thus, the levy of low charges compounded by the high waiver



undermines the rationale for levy of demurrage.

During discussions with the Railway Board (December 2006) it was stated that the quantum of demurrage waived was based on circumstances such as regularity of loading, future prospects of traffic and to avoid diversion of traffic to road. However, the fact remains that heavy waivers vitiate the concept of levy of demurrage and would not serve as a disincentive for wagon detentions, which have a direct impact on railway earnings.

### **Recommendations**

The creation of additional facilities in consultation with the parties involved should become a priority area of action, since the wagons in most cases are detained for want of adequate facilities for handling.

### **Conclusion**

The pilot project of enhancing the quantum of iron ore and coal to be carried per wagon was defective to the extent that the conditions laid down for improvement of track and monitoring were not complied with. Overloading was seen even beyond the enhanced limits which would result in serious damage to infrastructure.

In the rationalisation of freight, Audit observed that while re-classifying the commodities, Railways had not carried out a proper analysis of freight per wagon earned and the freight likely to be earned after revision in classification. This has reduced Railways earnings in respect of certain commodities considerably. Moreover, non provision of separate wagon-load class for commodities placed in the highest class has resulted in undue advantages to consigners and impacted operational efficiency. This has also abolished the impact of punitive measures in case of non-compliance of conditions laid down for availing the benefit of train load rates.

The procedure of wagon procurement was found deficient as the suppliers in the public sector were not adhering to the time schedules thereby hampering railway requirements. Wagons already available in the Railway network were also not utilised effectively and there was heavy detention at loading and unloading points as well as when taken up for maintenance and periodical overhauling.

Slide 1

**Session: 11**

**Performance Auditing in Railways**

Slide 4

**Performance Audit**

- A process that uses available evidence to form an opinion on the extent to which an agency utilises its resources in an economic, efficient and effective manner.
- The INTOSAI Auditing Standards define a performance audit
  - as ‘an audit of the economy, efficiency and effectiveness with which the audited entity uses its resources in carrying out its responsibilities’.

Training Module on Audit of Railways; Session:11

Slide 2

**Learning Objective**

- In this session, the participants will be able to understand the basic concepts of Performance Audit which will help them to focus on audit issues in the actual work context.

Training Module on Audit of Railways; Session:11

Slide 5

**Performance Audit**

- Economy is
  - ‘minimizing the cost of resources used for an activity. Economy issues focus on the cost of the inputs and processes.
- Efficiency is
  - ‘the relationship between the outputs or other results and the resources used to produce them’. Efficiency exists where the use of financial, human, physical and information resources is such that output is maximised.
- Effectiveness is
  - ‘the extent to which objectives are achieved and addresses the issue of whether the program/activity has achieved its objectives.’

Training Module on Audit of Railways; Session:11

Slide 3

**Introduction**

- The Comptroller & Auditor General examines various aspects of Government expenditure.
- The audit done by C & A G is broadly classified into Regularity Audit and Performance Audit.

Training Module on Audit of Railways; Session:11

Slide 6

**Performance Audit : Economy and Efficiency and Programme Audit.**

- Economy and efficiency audit includes determining
  - whether the entity is acquiring, protecting, and using its resources (such as personnel, property, and space) economically and efficiently,
  - the causes of inefficiencies or uneconomical practices, and
  - whether the entity has complied with laws and regulations on matters of economy and efficiency.
- Programme audit includes determining
  - the extent to which the desired results or benefits established by the legislature or other authorising body are being achieved,
  - the effectiveness of organizations, programs, activities, or functions, and
  - whether the entity has complied with significant laws and regulations applicable to the programme.

Training Module on Audit of Railways; Session:11

Slide 7

**Performance Audit Guidelines**

- Based on 'Performance Auditing Guidelines' framed in May 2004.
- Contains a framework for the entire process of performance auditing within SAI India.
- Provide the best practices that the SAI must follow in planning, implementing, reporting, follow-up processes and quality assurance in all performance audits.
- Outline consistent principles, objectives, approach, methodology, techniques and procedures.

Training Module on Audit of Railways; Session:11 7

Slide 10

**Performance Audit conducted by Zonal Railways contd.**

- Method of selection of topics for local and central reviews -
  - Suggestion is sought by Hd.Qrs. on topics for next year's local and central reviews.
  - Suggestion accompanies detailed justification (write-up) for the selection of topics according to the PA guidelines.
  - Topics having
    - public interest (i.e. people centric)/core governance subject,
    - concurrent or early stage audit of policy shift/sunrise issues and
    - link with the working of the Railway as a commercial organization are selected.

Training Module on Audit of Railways; Session:11 10

Slide 8

**Mandate for Performance Audit**

- Mandate of SAI India for audit is derived
  - from the Constitution of India, as established under the C & AG's DPC Act 1971.
- Ministry of Finance, Department of Economic Affairs (Budget Division) vide OM No. F.No.6 (5)-B(R)/99 of 13 June 2006 accepted and clarified that the scope of Audit by C&AG of India includes Performance Audit.

Training Module on Audit of Railways; Session:11 8

Slide 11

**Standard format for furnishing information Understanding the entity and its environment**

- Manpower-
  - sanctioned strength and deployment
- Functions and objectives of the organisation
- Budget and Expenditure
- Targets and performance
- Volume and Value of the Contracts handled
- Volume and value of Stores procurement
- Capital Assets
- Any other relevant information

Training Module on Audit of Railways; Session:11 11

Slide 9

**Performance Audit conducted by Zonal Railways**

- Reviews on the basis of the new Performance Audit Guidelines started in the Railways from the year 2005-06.
- Two types of Performance Review conducted in Zonal Railways-
  - Local Review conducted for an independent evaluation of any issue, and
  - Centrally Coordinated Review on topics of common relevance to all Zonal Railways.

Training Module on Audit of Railways; Session:11 9

Slide 12

**Factors guiding selection of subject for IT Audit**

- Risk
- Financial materiality
- Significance
- Visibility
- Past performance
- Estimated impact

Training Module on Audit of Railways; Session:11 12

Slide 13

**Understanding the programme, subject, the entity and the environment - planning steps**

- Collection of information about the audited entity and its organisation in order to assess risk and to determine materiality;
- Defining the objective and scope of the audit;
- Undertaking preliminary analysis/study to determine the approach to be adopted and the nature and extent of the enquiries to be made later;
- To develop a sound understanding of the subject of audit, the documents and information to be relied upon are to be identified and gone through. This will help in identifying the key audit issues.

Training Module on Audit of Railways; Session:11 13

Slide 16

**Preparing Study Design Matrix contd.**

- Framed to facilitate audit tests back-to-back against each of the lowest level issues with reference to the criteria and observed data to generate evidence.
- Criteria for each question should be determined to benchmark the observed data against them.
- The sources from where data will be collected needs to be clearly identified and detailed.

Training Module on Audit of Railways; Session:11 16

Slide 14

**Setting the Audit Objectives**

- Expressed in terms of questions about performance i.e., achievement of  
– economy, efficiency and effectiveness of an entity /programme /activity under audit.
- Pivot of any performance audit around which the entire exercise revolves.
- Should be stated in complete statement form with reference to the policy and programme objectives.

Training Module on Audit of Railways; Session:11 14

Slide 17

**Preparing Study Design Matrix contd.**

- The methods of data collection are to be identified and recorded.
- The units and sub-units where data will be collected from are to be identified on the basis of appropriate sampling techniques.
- Evidence generated from the data will have to fulfill the standards of relevance, competence and above all sufficiency.

Training Module on Audit of Railways; Session:11 17

Slide 15

**Preparing Study Design Matrix**

- Methodology to find answers to the lowest levels of questions developed as a result of issue analysis.  
– The answers are found with the help of audit test programmes consisting of the test of the hypothesis behind the question with the help of a comparison between the *expectation / criteria (what should be)* with the *observation (what is)*.

Training Module on Audit of Railways; Session:11 15

Slide 18

**Implementation of Performance Audit**

- Audit Engagement  
– Principal Director of Audit sends an engagement letter to the entity chief, communicating
  - the launch of audit
  - the entity units selected for audit
  - the time-frame for audit
- and request him to issue necessary directions to the functional officers to provide documents and information to the audit team.

Training Module on Audit of Railways; Session:11 18

Slide 19

**Implementation of Performance Audit**  
Contd.

- **Entry Conference**
  - Held by the PDA with the chief of the entity before the audit process starts.
  - It affords an opportunity for audit to explain to the entity the audit plan consisting of the audit objectives, approach and time frame besides appraising the entity of the data, information and documents that will be required by the audit team.
  - The working procedures for audit may also be established in this meeting.

Training Module on Audit of Railways; Session:11 19

Slide 22

**Structure of the report**

- The Performance Audit report should be presented as per the following structure:
  - Title
  - Highlights
  - Gist of recommendations
  - Introduction
  - Scope of audit
  - Audit objectives
  - Audit methodology
  - Audit findings
  - Conclusions, recommendations and impact

Training Module on Audit of Railways; Session:11 22

Slide 20

**Implementation of Performance Audit**  
Contd.

- **Exit Conference**
  - Generally, the PDA holds the Exit as well as the Entry Conference with the General Manager of the Zonal Railway in presence of the concerned Departmental Heads and FA& CAO.
  - All audit observations must be issued to the entity at least one or two days before the scheduled Exit Conference.
  - Exit conference is an opportunity for the entity to discuss the audit findings with the SAI representatives.

Training Module on Audit of Railways; Session:11 20

Slide 23

**Evidence**

- Needs to be competent, relevant, sufficient and reliable to support the audit finding.
- Conclusions are consistent with the audit evidence;
- Methods of obtaining should be mentioned;
- Should be strongly persuasive.
- The auditors should have a sound understanding of techniques and procedures such as inspection, observation, enquiry and confirmation to collect audit evidence.

Training Module on Audit of Railways; Session:11 23

Slide 21

**Compilation of Central Reviews and Issue of Report to Railway Board**

- Compilation is done at Headquarters.
- The facts and figures of the compiled Review Note / Report and the relevant Annexures are then got verified by the field offices.
- The Review Note is discussed by the Chairman, Railway Board and other Members in the exit conference and issued to the Ministry of Railways.

Training Module on Audit of Railways; Session:11 21

Slide 24

**Evidence - Competence contd.**

- Evidence is competent when it is valid and reliable. Reliable evidence encompasses-
  - An evidence corroborated by evidence obtained from other sources;
  - Documentary evidence rather than oral evidence;
  - Evidence obtained through direct observation rather than indirect observation;
  - Entity generated information if the internal control system of the entity is reliable;
  - Oral evidence corroborated in writing;
  - Photocopies, if the source of photocopies is identified, source noted and certified;
  - Evidence accepted by the entity.

Training Module on Audit of Railways; Session:11 24

Slide 25

**Evidence - Relevance** contd.

- An evidence is relevant if it bears a clear and logical relationship to audit objectives and to the criteria.

**Evidence - Sufficiency or Reasonableness**

- Sufficiency is a measure of quantity of audit evidence.
- Evidence is sufficient if the test is carried out on a reasonable representative sample selected objectively.

Training Module on Audit of Railways; Session:11      25

Slide 27

**Sources of Evidence**

- Policy statements and legislation
- Published programme performance data
- Management reports and reviews
- Files of the entity on the subject e.g.
  - Strategic and operational planning files;
  - Budget files;
  - Management control, monitoring and review files;
  - Internal audit reports, internal and external evaluations; and
  - Complaints and disputes, etc.
- Databases
- SAI sources
- Auditors' observation –
- Physical verification / inspection Reports.

Training Module on Audit of Railways; Session:11      27

Slide 26

**Types of Evidences**

- *Physical evidence*
- *Oral evidence*
- *Documentary evidence*
- *Analytical evidence*

Training Module on Audit of Railways; Session:11      26

Slide 28

**Sampling Techniques**

- The sampling techniques to be applied will depend upon the nature of data and audit objectives.
- The central issue in selection of the sample should be -
  - the sample selected is representative of the entire population;
  - the sample is unbiased and each element of the population has an equal chance of appearing in the sample within the scope of the sampling method selected; and
  - the sample size is sufficient to extrapolate the result of audit test to the entire population within the confidence levels.

Training Module on Audit of Railways; Session:11      28

# Session: 12

## **Railway Audit:**

**-Duties and Powers**

**-Issue of Inspection Reports and**

**Draft Paragraphs**

<b>Session Title: Railway Audit: Duties and Powers, Inspection Reports, Draft Paragraphs.</b>		Session Guide
<b>Instructor's Guide</b>	Reference	Participants' Response
<b>Session Overview</b>		
<b>Welcome</b> participants to the session and remind them that their active participation is critical for the success of each session.	Lecture	
<b>Learning Objective</b>		
<b>Inform:</b> Given the inputs of duties and powers relevant to Railway Audit through group discussion, lecture and Power Point slide show, the participants will at the end of the session acquire basic concepts of the duties and powers reporting procedures etc. which will help them to focus on audit issues in the practical job scenario.	Lecture	
<b>Basic Concepts</b>		
<b>Discuss:</b> <ul style="list-style-type: none"> <li>● Provisions of C&amp;AG's Duties, Powers and Conditions of Service Act (DPC Act).</li> <li>● Functions of Railway Audit.</li> <li>● Duties of Principal Director of Audit (PDA).</li> <li>● Inspection Report.</li> <li>● Drafting.</li> <li>● Audit Notes.</li> <li>● Difference of opinion between Audit and Executive.</li> <li>● Audit Report.</li> <li>● Framing of Audit Comments.</li> </ul>	Lecture with PowerPoint Slide show <b>Session 12 Railway Audit:- Duties and Powers, Inspection Reports, Draft Paragraphs</b>	
<b>Summarise:</b>		
<b>Distribute</b> Participants' Note. <b>Tell</b> the participants that during the session, we discussed Provisions of DPC Act, Functions of Railway Audit, Duties of Principal Director of Audit, Inspection Reports, Drafting Audit Notes and Framing of Audit Comments. <b>Invite</b> questions on themes discussed. If participants have any doubts/clarifications about themes, clarify the same. Answer participants queries. <b>Thank</b> the participants and bring the session to a close.	Participants' Note Session 12	

**Training Method:** Interactive Lecture and Power Point Slide Show.

**Materials Required:** Power Point Slides, Projector, White Board, Marker Pen and Participants' Note



## Session Title:

### **Railway Audit:-**

Duties and Powers, Inspection Reports, Draft Paragraphs.

### **C&AG's Duties, Powers and Conditions of Service Act**

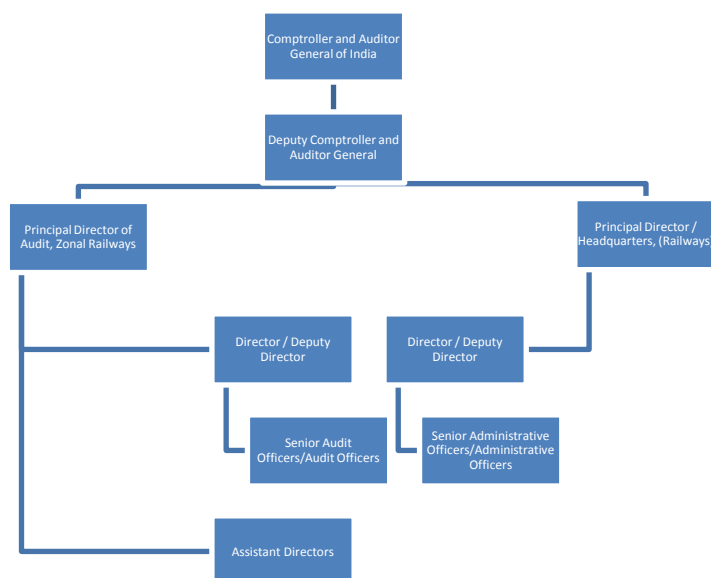
The functions of the C&AG have been incorporated in C&AG's DPC (Duties, Powers and Conditions of Service) Act, 1971. He is responsible for:

- Audit of all expenditure both in and outside India on Railways from the revenues of India; but:
  - no responsibility is imposed on him for keeping the accounts.
- Audit of all transactions of Railways relating to Debt, Deposits, Sinking Funds Advance, Suspense Account and Remittance Transactions.

- Audit of Receipts and Accounts of Stores and Stock relating to Railways.
- Audit and Certification of Accounts of Government Companies and Corporations linked to Railways established by or under any law by Parliament/Legislative Assembly in accordance with the provisions of the respective enactments.
- Audit and Certification of the accounts of any body or authority relating to Railways whose audit has not been entrusted to him, if so required by the President upon such terms and conditions as may be agreed upon between the C&AG of India and the Government of India.
- The correctness of the dividend payable from Railway finances to the General Revenues of India under the convention for the separation of Railway from general finances.

## Organisational Set-up of the Railway Audit Branch:

(Source: RAM Para 12)



### Functions of Railway Audit

(Source: RAM Para 6)

The Railway Audit Wing conducts audit on behalf of and under the direction of the C&AG and is responsible for:

- Scrutinising the adequacy and suitability of all instructions relating to the compilation of railway accounts and internal check procedure, whether these instructions be in the form of codes or otherwise, to satisfy himself that such instructions are consistent with the relevant

statutory rules and the requirements of audit and accounts and—

- Audit of
  - Sanctions having financial effect accorded by the Government of India other than those pertaining solely to an individual Railway or Railway Accounts office;
  - Sanctions regarding financial rules and general orders issued by the President which are not of a general nature but are applicable exclusively to the Railway Department;
  - Tenders invited by the Railway Board for the purchase of cast iron and steel sleepers, rolling stock and other materials;
  - Accounts maintained in the office of the Railway Board;
  - All sanctions and orders issued by the President or Government of India relating to through traffic;
  - Rules and modifications issued by the IRCA and all correction slips to the tariffs and publications issued by the Association;
  - Budget orders issued at the commencement of the financial year;
  - Subsequent orders of re-appropriation against the vote of Parliament;
  - Orders of appropriation and re-appropriation issued by the President, and
  - Orders of regularisation of excesses issued after a consideration of the Appropriation Accounts and the Audit Report;
  - Monthly and Annual Accounts of Railways and of the Railway section of the Finance Accounts of the Union Government including the Annual Review of Balances as compiled by the Railway Board;
  - The Appropriation Accounts prepared by the Railway Board certifying to their accuracy and submitting the Audit Report thereon to the C&AG.

### **Duties of Principal Director of Audit (PDA)**

**(Source: RAM Para 4)**

The Principal Directors of Audit attached to the individual railways are responsible for the scrutiny and audit of:

- Financial sanctions pertaining to their railways and offices under their audit control, accorded by the Government of India, Ministry of Railways or the General Manager.

- The allocation of estimates sanctioned by the same authorities.
- General orders issued by the General Manager under the powers delegated to him.
- Sanctions pertaining to local traffic.
- Sanctions issued by the Railway Administration relating to interchange traffic between railways.
- The detailed accounts of the Railways to see that
  - These have been correctly prepared and are in proper form;
  - No alteration (in the form of accounts or in classification) is made without the approval of the competent authority;
  - The system of internal check is efficient;
  - All appropriations or re-appropriations sanctioned by the GM or subordinate authorities are in order;
- Allocation of expenditure divisible between two or more sections of a railway to see that the division between the main and worked lines and between commercial and strategic sections of a Railway has been made correctly;
- Expenditure from the Secret Fund placed at the disposal of Railway Administration, only to the extent of seeing that the prescribed certificate is received from the General Manager in respect of each financial year;
- The annual Review of Balances and the Appropriation Accounts of the Railway and certifying to their correctness;

### **Inspection Report**

**(Source: RAM Para 468)**

- The results of central audit and local inspections will be communicated to the Chief Accounts Officer in the form of (1) A Specific Report, (2) Audit Note or (3) An Inspection Report.
- Only the more important and serious irregularities of the nature mentioned below should be incorporated in a specific report-
  - Questions of procedural principle;
  - Questions affecting the efficiency of internal check;
  - Individual irregularities of an important and serious nature and
  - Expenditure for other financial transactions not covered by the sanction of competent authority. Other irregularities

should be dealt with through the medium of an Audit Note or Inspection Report;

- An Audit Note or Inspection Report will consist of two parts-
  - Part-I dealing with more important matters and
  - Part-II dealing with minor and routine points.

## Drafting

(Source: RAM Para 461)

- The comments of audit should be brief, intelligible and to the point. Audit objections should be conveyed to the Railway Administration in courteous and impersonal terms. They should contain full reference to the relevant documents and explicitly state the rule or order, which is considered to have been violated. The subject matter of the objections should be arranged in logical sequence, all objections of similar type or relating to the same subject should be grouped together and generalized comments made where desirable.
- The usefulness of an objection or of a suggestion lies in its speedy disposal. It should be seen that audit objections or investigations deal as far as possible with recent transactions. In exceptional cases, it may not be possible to avoid taking up old case, e.g., where the case has been subjudice in previous years or where although the case is old, the adjustment and write off from which the irregularity came to notice has been made recently.

## Audit Notes

(Source: RAM Para 466)

- When the irregularities noticed in course of test audit are of minor nature or require some clarifications etc., they may conveniently be included in rough/draft Audit Notes and handed over to the Accounts Office for remarks and return within a reasonable time which may be fixed by the Principal Director of Audit in consultation with the FA and CAO. Delay at each stage in the return of the rough Audit Notes by the Accounts staff, in their translation into final Audit Notes in the office of Principal Director of Audit and in the issue of fair copies of such final Audit Notes should be avoided. As far as possible petty objections, will in the first instance be discussed by the Accounts and Audit staff concerned in monthly meetings and the

results of discussion recorded and initialed by both.

- A regular Audit Note needs issue only in respect of objections, which require some reference to other departments or regularization of irregular expenditure through sanction of competent authority and are likely to take some time.
- Specific reports and Audit Note should be issued without delay and the latter normally before the audit of the next month's accounts is over. Inspection Reports should be issued as soon as possible after the return of the Inspection Party to Headquarters.
- No objection which is likely to find a place eventually in the Audit Report or which involves (except in unimportant cases) a question of the correctness or the adequacy or any procedure or the interpretation of any financial rule or order; should ordinarily issue without the approval of the Principal Director of Audit.
- The Principal Director of Audit should maintain registers for watching the disposal of specific reports and Part I Inspection Reports/Audit Notes showing the dates of issue, receipt of replies from Accounts and issue of rejoinders till these are finally disposed of. A suitable record of the Part II reports and Audit Notes issued and reviewed should also be maintained.
- The Inspection Report/Audit Note Part II should generally be reviewed half yearly, restricting the review to really important items only. In watching the disposal of Inspection Report/Audit Note Part II the actual verification of the action taken and/or adjustments made by the Accounts Office to set right the irregularities pointed out by audit may be restricted to really important items to be decided by the Branch Officer.
- A statement showing the audit objections issued up to 31<sup>st</sup> March but outstanding on 31<sup>st</sup> August of the year should be sent annually to the Deputy Comptroller and Auditor General in the 1<sup>st</sup> week of September.
- The Principal Director of Audit has no power of surcharge or disallowance. He can bring to the notice of the Chief Accounts Officer cases in which irregular or inadmissible expenditure has been or is likely to be incurred or where revenues or other dues have not been collected,

and it is for the Chief Accounts Officer to decide what action is to be taken. The latter should arrange to get from other executive or Administrative Officers of the Railway any information or explanation which may be necessary for the disposal of audit objections communicated to him and to take the necessary steps to set the irregularity right. If Audit is finally dissatisfied with the action taken, it is open to Audit to bring the matter to the notice of the higher authorities or of the Public Accounts Committee through the Audit Report.

### **Difference of Opinion between Audit and Executive**

(Source: RAM Para 479 & 480)

- If the Deputy Comptroller and Auditor General considers that any rule or order issued by the Government of India or the Financial Commissioner, Railways infringes a universally accepted standard of official conduct or financial administration he should put his views before the authority concerned and suggest a reconsideration of the rule or order. In the case of further disagreement the Deputy Comptroller and Auditor General will take suitable action if he considers necessary.
- In cases of difference of opinion between the Principal Director of Audit and the Railway Administration, two courses are open to him; one is to refer the case to the Deputy Comptroller and Auditor General. He should do so in all really important cases or where he is doubtful of the correctness of his own views and also in question affecting the adequacy of the disciplinary action taken by the Railway Administration. If the Principal Director of Audit decides to refer the matter to the Deputy Comptroller and Auditor General he should inform the Chief Accounts Officer of his intention to do so and the latter will then await the result of the reference before deciding further action.

### **Audit Report**

(Source: RAM Para 485)

- The Deputy Comptroller and Auditor General is the authority entrusted with the preparation of the Audit Report on the Appropriation Accounts of the Railways. Principal Directors of Audit are not required to compile formal Audit Reports but they will submit necessary material from which Deputy Comptroller and Auditor General will select and

process such material as he thinks fit including the results of his own check of accounts prepared by the Railway Board and review of Railway Board's contracts etc. The C&AG will submit the Audit Report together with Appropriation Accounts of Railways in India and connected documents prepared by the Railway Board to the President who causes the same to be laid before the Parliament.

- The Railway Audit Report will mainly include (i) comments on the Appropriation Accounts and the connected documents including the Railway Board's Review thereon and (ii) important financial irregularities and cases of losses, write-off, nugatory expenditure and (iii) other topics of interest.
- The draft of the Railway Board's Review is seen by the Deputy Comptroller and Auditor General and the opportunity is taken at that time to suggest incorporation therein of any important item that might be considered necessary by him.

### **Framing of Audit Comments**

(Source: RAM Para 491)

In addition to the instructions contained in paras 414 to 416 of Railway Audit Manual the following instructions should be borne in mind while framing comments, if any considered necessary in important cases:-

- All Audit Comments should be based on facts and not on inferences or assumptions.
- The facts on which the comment is based should be checked thoroughly and completely before the actual comment is framed.
- Enquiries made by audit as a prelude to the framing of the comment should be thorough and pursued to finality.
- In commenting on the irregularity, every endeavour should be made invariably to give a clear and correct account of it in plain language. Wherever figures are available, these should be indicated after ensuring the correctness of the same.
- To make the comment a fair and unbiased record of facts, all such details as are essential should be incorporated in the comment.
- On receipt of the Administration's remarks on a comment a complete re-examination of the case should be made in an impartial manner before reaching finalisation in the matter. The comment may, then be modified, if necessary, in

consultation with the Administration or dropped if the re-examination shows that the comment is not correct or otherwise unsuitable.

- If the facts have been verified by the Administration but the conclusion drawn by Audit is not agreed to by the Administration and still considered justifiable by Audit, a note should be sent along with the comment explaining clearly the views of the Administration and the circumstances under which the retention of the comment is justified.
- Comments on small and unimportant variations of defects should be avoided. The magnitude of the grant concerned should also be taken into account for this purpose.
- Each comment should be typed on a separate sheet of paper and categorised on the lines adopted in the Railway Audit Reports.
- Reference to the corresponding explanation number in the Appropriation Accounts should be quoted in the margin of the comments and the remarks 'accepted' by the Administration or 'Advance' should be quoted within brackets at the bottom of the comment.
- Comments on the various grants/Annexures etc. should be sent to the Administration for verification of Audit conclusions and not for acceptance of the same.
- In no case should the comments be reproduced in the body of the letters sent to the Comptroller and Auditor General of India.
- Whenever Railway Board's letters to the Railway Administration or the Railway Administration's letters to Railway Board are referred to in the comment, copies thereof together with the copies of relevant letters to which these may be replies should also be sent.

Slide 1

**Session 12**

**Railway Audit:**  
-Duties and Powers  
-Issue of Inspection Reports and Draft Paras

Slide 4

**Basic Concepts**

- Audit of Receipts and Accounts of Stores and Stock relating to Railways;
- Audit and Certification of Accounts of Government Companies and Corporations linked to the Railways;
- The correctness of the dividend payable from Railway finances to the General Revenues of India.

Training Module on Audit of Railways: Session:12 4

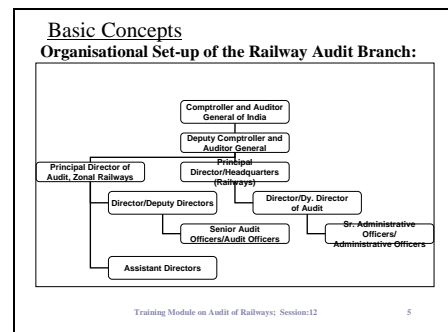
Slide 2

**Learning Objective**

- In this session, the participants will be able to understand the basic concepts of duties and powers of audit, issue of Inspection Reports and Draft Paras which will help them to focus on audit issues in the practical job scenario.

Training Module on Audit of Railways: Session:12 2

Slide 5



Slide 3

**Basic Concepts**

- The functions of the Comptroller and Auditor General of India as incorporated in C & AG's DPC (Duties, Powers and Conditions of Service) Act, 1971 are:
  - Audit of all expenditure both in and outside India on Railways; but:
    - no responsibility is imposed on him for keeping the accounts;
  - Audit of all transactions of Railways relating to Debt, Deposits, Sinking Funds and Advance.

Training Module on Audit of Railways: Session:12 3

Slide 6

**Functions of Railway Audit**

- The Railway Audit Wing is responsible for audit of-
  - Sanctions regarding financial rules and general orders issued by the President which are applicable exclusively to the Railway Department;
  - Tenders invited by the Railway Board for the purchase of materials;
  - Accounts maintained in the office of the Railway Board;

Training Module on Audit of Railways: Session:12 6

Slide 7

**Functions of Railway Audit** Contd.

- Budget orders issued at the commencement of the financial year;
- Subsequent orders of re-appropriation against the vote of Parliament;
- Orders of appropriation and re-appropriation issued by the President, and
- Monthly and Annual Accounts of Railways.

Training Module on Audit of Railways; Session:12 7

Slide 10

**Inspection Report**

- The result of Central audit and local inspections will be communicated to the Chief Accounts Officer in the form of-
  - A Specific Report,
  - Audit Note,
  - An Inspection Report.

Training Module on Audit of Railways; Session:12 10

Slide 8

**Duties of Principal Director of Audit (PDA)**

- The PDA is responsible for the scrutiny and audit of-
  - Financial sanctions pertaining to their Railways and offices under their audit control;
  - Sanctions pertaining to local traffic;
  - Sanctions issued by the Railway Administration relating to inter change traffic between Railways;

Training Module on Audit of Railways; Session:12 8

Slide 11

**Inspection Report** Contd.

- The 'Specific Report' contains the following important and serious irregularities--
  - Questions of procedural principle;
  - Questions affecting the efficiency of internal check;
  - Individual irregularities of an important and serious nature, and
  - Expenditure for other financial transactions not covered by the sanction of competent authority.

Training Module on Audit of Railways; Session:12 11

Slide 9

**Duties of Principal Director of Audit (PDA)** Contd.

- Allocation of expenditure divisible between two or more sections of a Railway to see that the division between the main and worked lines and between commercial and strategic sections of a Railway have been made correctly.

Training Module on Audit of Railways; Session:12 9

Slide 12

**Audit Notes**

- Audit Notes consist of the following:
  - When the irregularities noticed in course of test audit are of a minor nature or require some clarifications etc., they may conveniently be included in rough/draft Audit Notes and handed over to the Accounts Office for remarks;
  - The Inspection Report/Audit Note Part II should generally be reviewed half yearly to verify that the action taken and/or adjustments made by the Accounts Office to set right the irregularities pointed out by audit may be restricted to really important items;

Training Module on Audit of Railways; Session:12 12

Slide 13

**Audit Notes** Contd.

- A regular audit note needs issue only in respect of objections, which require some reference to other departments or regularization of irregular expenditure through sanction of competent authority and are likely to take some time;
- The Principal Director of Audit should maintain registers for watching the disposal of specific reports and Part I Inspection Reports/Audit Notes showing the dates of issue, receipt of replies from Accounts and issue of rejoinders till these are finally disposed of;

Training Module on Audit of Railways; Session:12 13

Slide 16

**Audit Report** Contd.

- The Railway Audit Report will mainly include-
  - Comments on the Appropriation Accounts and the connected documents including the Railway Board's Review thereon;
  - Important financial irregularities and cases of losses, write-off, nugatory expenditure, and
  - Other topics of interests.

Training Module on Audit of Railways; Session:12 16

Slide 14

**Audit Notes** Contd.

- The Principal Director of Audit has no power of surcharge or disallowance;
- He can only bring to the notice of the Chief Accounts Officer, cases of irregular or inadmissible expenditure which have been or are likely to be incurred or where revenues or other dues have not been collected.

Training Module on Audit of Railways; Session:12 14

Slide 17

**Framing of Audit Comments**

- The following instructions should be borne in mind while framing audit comments-
  - All Audit Comments should be based on facts and not on inferences or assumptions;
  - The facts on which the comments are based should be checked thoroughly and completely;
  - In commenting on the irregularity, every endeavour should be made invariably to give a clear and correct account of it in plain language;

Training Module on Audit of Railways; Session:12 17

Slide 15

**Audit Report**

- The Audit Report is prepared in the Office of the C&AG of India on the basis of materials submitted by the Principal Directors of Audit in various Zonal Railways.
- The Comptroller and Auditor General of India will submit the Audit Report together with Appropriation Accounts of Railways and connected documents prepared by the Railway Board to the President who causes the same to be laid before the Parliament.

Training Module on Audit of Railways; Session:12 15

Slide 18

**Framing of Audit Comments** Contd.

- On receipt of the Administration's remarks on a comment a complete re-examination of the case should be made in an impartial manner before reaching finalisation in the matter;
- Comments on small and unimportant variations of defects should be avoided. The magnitude of the grant concerned should also be taken into account for this purpose.

Training Module on Audit of Railways; Session:12 18



## Slide 19

**Draft Paragraph**

- The Principal Director of Audit shall send a copy of the proposed audit observations in the form of a draft paragraph to the General Manager of the concerned Zonal Railways by name for communicating the comments, observations and explanation of the Government within a period of six weeks from the date of the letter or within such other period of time as may be specified.

Training Module on Audit of Railways; Session:12 19

## Slide 20

**Draft Paragraph** Contd.

- The Principal Director of Audit shall also offer to discuss the draft paragraph with the concerned Railway Heads of the Department at mutual convenience within the aforesaid period.
- The Principal Director of Audit shall simultaneously send one copy of the draft paragraph to the Deputy Comptroller and Auditor General (Railways).

Training Module on Audit of Railways; Session:12 20

## Slide 21

**Draft Paragraph** Contd.

- The draft paragraph shall be annotated with reference to the supporting audit evidence. The Principal Director of Audit shall provide copies of any relevant documents and evidence in his possession that may be required by the Railways.

Training Module on Audit of Railways; Session:12 21

## Selected References

1.	Indian Railway Establishment Code Vol. I and II
2.	Indian Railway Code for the Stores Department Vol. I and II
3.	Railway Audit Manual (Fifth Edition) issued by Deputy Comptroller and Auditor General of India
4.	Coaching Tariff, Indian Railway Conference Association, Vol. I and II
5.	Indian Railway Commercial Manual Vol. I and II
6.	Annual Statistical Statement 2003-04
7.	Indian Railway Code for the Accounts Department Part I and II
8.	Indian Railway Code for Engineering Department
9.	Indian Railway Code for Mechanical Department (workshop)
10.	Report of the Comptroller & Auditor General of India-Union Government, Railways
11.	Annual Statistical Statements 2003-2004, Indian Railways
12.	GM's Annual Report, 2003-2004
13.	Indian Railway Permanent Way Manual