

CHAPTER 4: STORES AND ASSETS MANAGEMENT

4.1 Procurement practices

4.1.1 Central, Eastern, East Coast, Northern, North Eastern, North Western, Southern, South Central, South Eastern, South East Central, South Western, West Central and Western Railways and RPU, DMW, ICF and RCF *Extra expenditure due to adoption of incorrect price index value of 'metallic minerals' instead of 'steel ingots' in fixation of prices of wheels and axles*

Due to adoption of price index of 'metallic minerals' instead of 'steel ingots' or 'steel', the actual metal used for manufacture of wheels, the prices were fixed on higher side resulting in extra expenditure and unintended benefit of Rs.58.06 crore to SAIL during the year 2005-06 alone

As per Railway Standard Specification for 'solid forged steel wheels for carriages, wagons, EMU stock and Locomotives', the wheels are to be manufactured from steel made by electric or basic oxygen process. The process of manufacturing also elaborates that rolled/forged wheels should be manufactured from ingots capable of producing two or more wheels after removal of discards. This clearly indicates that the metal used for manufacturing wheels is 'steel ingots'.

Based on the price escalation formula recommended by a committee in 1997-98, Railway Board revises the prices of wheels procured from Steel Authority of India Limited (SAIL) every year. As per the existing formula the variation in price index for the month of December in the preceding two years is considered for revision in prices of wheels. The component used in the formula are coal 25 per cent, power 14 per cent, metal 24 per cent, labour 17 per cent and fixed component 20 per cent.

Audit analysis of the prices of wheels and axles revised for the year 2005-06 revealed that though the metal used in manufacture of wheels was 'steel ingots' or 'steel', the price index variation of metallic mineral, instead of steel or steel ingots, was taken in to account. As the price index of 'metallic mineral' had increased abnormally from 120.7 in December 2003 to 373.5 in December 2004, the revision in prices of wheels was very much on the higher side. Compared to this the price index of 'steel ingots' had risen from 144.3 to 180.1. As the adoption of price index of 'metallic mineral' had resulted in overall increase of 57.81 per cent over the prices of wheels prevalent during 2004-05, Railway Board negotiated the rates with SAIL and agreed to take the average increase recorded in the price index of 'metallic minerals' and 'iron', thereby allowing an increase of 41.77 per cent. Since the metal used in manufacture of wheels was steel or steel ingots, the Railway Board's action to apply the average increase in 'metallic minerals' and 'iron & steel' was not justified and it allowed unintended benefit to the manufacturer. By taking into

account the price index of steel ingots the increase in rates of wheels over the prices of 2004-05 worked out to 13.39 per cent only. The details of the quantities of wheels and axles procured for different Zonal Railways during the year 2005-06 and the extra expenditure of Rs.58.06 crore incurred is given in the table below:

Railway	Quantity of wheels & Axles procured during 2005-06				
	BG Coaching wheels 16 T	BG Coaching Axles 16 T	BG Loco wheels	MG Loco wheels	BG Coaching wheels sets 16 T
Central	5232	0	5263	0	0
Eastern	0	0	2040	0	0
East Coast	1535	48	0	0	0
Northern	5612	0	8230	0	0
North Eastern	2170	73	440	0	0
North Western	2196	84	440	81	0
Southern	7138	0	794	0	0
South Central	2847	43	1328	0	0
South Eastern	2279	0	8327	0	0
South East Central	0	0	268	0	0
South Western	1967	96	0	0	0
Western	2480	0	2499	0	0
West Central	1003	0	0	0	0
RCF/KXH	0	0	0	0	1586
CLW &DLW	0	0	5198	0	0
DMW/PTA	0	0	1665	0	0
ICF, Perambur	8405	676	0	0	0
Total	42864	1020	36492	81	1586
Price difference per unit (in Rs.)	5677	6072	8327	5705	16860
Extra expenditure	24,33,38,928	61,93,440	30,38,68,884	4,62,105	2,67,39,960

= Rs.58,06,03,297.00

When the matter was taken up with the Central Railway in March 2007, they stated in April 2007 that wheels and axles are procured centrally by Railway Board and they have no role in deciding the prices. They added that the para pertains to Railway Board. The reply is not convincing as no attempt has been made to bring this issue to the notice of Railway Board.

Thus due to adoption of price index of 'metallic minerals' instead of 'steel ingots' or 'steel', the actual metal used for manufacture of wheels, the prices were fixed on higher side resulting in extra expenditure and unintended benefit of Rs.58.06 crore to SAIL during the year 2005-06 alone. The higher rates would also impact on future purchases if no remedial action is taken for adopting the correct formula.

The matter was brought to the notice of Railway Board in September 2007; their reply has not been received (December 2007).

4.1.2 Railway Board: Avoidable expenditure on procurement of Corten Steel

Despite being aware of supply constraints, Railway Board placed an order for supply of the entire quantity of corten steel on M/S TISCO resulting in non-supply leading to avoidable expenditure of Rs.12.22 crore

Although M/S Tata Iron and Steel Company (TISCO) had clearly informed in January 2004 that due to closure of the plant for some period they would not be able to supply entire quantity of steel quoted against a tender, Railway Board placed an order (March 2004) on them for supply of various items of steels including a quantity of 19782 MT of Corten Steel Sheet of 3.15 mm thickness. On receipt of order the firm intimated in March 2004 that it expected significant production shortfalls due to which it would not be able to ensure smooth supply of steel to Railways. Railway Board, however, did not take any corrective action.

Subsequently in July 2004 Director/Railway Stores (I&S), Kolkata requested Railway Board to arrange immediately 6500 MTs of corten steel sheet of 3.15 MM thickness as M/S TISCO would be able to supply only 7500 MT. Accordingly Railway Board called for tenders and after negotiation with M/S SAIL placed the order for supply of 8450 MT of corten steel sheets at the rate of 32750 per MT.

Audit observed that the rates quoted by M/S SAIL at the time of placement of order on M/S TISCO were Rs.20550 per MT as against the rates of Rs.19580 per MT quoted by M/s. TISCO. Had the Railway considered the request of M/S TISCO before placement of the order in March 2004, they would have incurred an extra expenditure of only Rs.0.82 crore. However, on subsequent procurement of the same quantity they incurred extra expenditure of Rs.12.22 crore (Rs.10.31 crore on basis rates plus Rs.1.91 on account of ED+ST). It was also observed that Railway could not enforce the levy of liquidated damages of Rs.0.25 crore on account of M/S TISCO's inability to supply the full quantity.

The matter was brought to the notice of Railway Board in July 2007; their reply has not been received (December 2007).

4.1.3 Rail Coach Factory : Un-productive expenditure on procurement of a CNC machine

Decision to procure a CNC machine at a cost of Rs.12.17 crore without correctly assessing the work load resulted in avoidable payment of Rs.3.65 crore on account of payment of dividend to General revenues

Rail Coach Factory (RCF) placed a purchase order (September 2001) on M/s Jobs SPA, Italy at a total FOB value of Euro 1,765,090 through their Indian agent M/s Batliboi Limited, Mumbai for supply, installation and commissioning of one CNC machine. The machine was to be supplied by 29 August 2001, later extended by five months. The machine with Computer Aided Manufacturing/ Direct Numerical Control facility was required for machining the bogie frames.

The machine was received at RCF in February 2003 and installed in May 2003. An amount of Rs.12.17 crore was paid on account of 90 per cent of the cost of the machine, custom duty and other charges during December 2002 to January 2003.

The machine was commissioned in Bogie Shop in February 2004. Soon after its commissioning the machine went out of order. Despite a number of meetings with the representatives of the firm, RCF could not get the defects rectified and the machine remained under frequent breakdowns. It could machine only 341 bogie frames during February 2004 to March 2007 as against the requirement of 652 bogie frames (for 326 LHB coaches). Provisional Test Certificate had not been issued till March 2007.

Meanwhile, in order to meet with its production requirement, RCF got 183 bogie frames machined from outside sources and procured 128 bogie frames from the open market incurring an extra expenditure of Rs.1.11 crore.

In this connection the following comments arise:

- RCF justified the procurement of the machine on inflated workload for manufacture of 600 Bogie Frames per year (i.e. for 300 LHB coaches). However, as per Integrated Railway Modernisation Plan (IRMP) 2005-10 the actual requirement was not to exceed 300 Bogie Frames for 150 LHB coaches per annum up to 2010
- Due to improper functioning of CNC machine, Railway incurred extra expenditure of Rs.1.11 crore on outsourcing of machining work as well as procurement of bogie frames from trade.
- The machine has not been performing satisfactorily right from the time of its commissioning. RCF Administration neither succeeded in getting the supplier to abide by the warranty obligations nor invoked the bank guarantee (Rs.0.84 crore) to safeguard the Railways' interest.

Thus, RCF's decision, to procure a CNC machine at a cost of Rs.12.17 crore by improper projection of work load and without exploring the possibility of getting the bogie frames machined from outside sources at competitive and cheaper rates, was imprudent. It resulted in avoidable payment of Rs.3.65 crore on account of payment of dividend to General Revenues and Rs.1.11 crore on account of machining of bogie frames from outside sources during June 2003 to March 2007.

The matter was taken up with the RCF Administration (February 2007). They stated (July 2007) that after machine started production, 252 LHB coaches (504 bogie frames) have been turned out. Out of these bogie frames, 341 were machined in house, this indicates that 67.65 per cent of need was met by the machine. The reply is not acceptable as the rated capacity of machine was 600 bogie frames per year whereas only 341 bogie frames could be machined during the four year period i.e. which is only 14.21 per cent of the rated capacity.

The matter was brought to the notice of Railway Board in October 2007; their reply has not been received (December 2007).

4.1.4 Railway Board: *Extra expenditure due to placement of contracts for production of AC EMU /DC EMU coaches at higher rates*

Awarding of the contract at higher rates resulted in excess payment of Rs.7.97 crore to manufacturer and supplier of AC EMUs/DC EMUs

The Ministry of Defence (March 1995) approached the Ministry of Railways for placement of orders for coaches on Bharat Earth Movers Limited (BEML), a PSU under Ministry of Defence, with a commitment to match the prices to that of Railways' production units. Railway Board placed contracts (September 1996) on M/s BEML and M/s Jessop & Co. (another PSU under Ministry of Industry) for production of AC EMU coaches. Steel, wheel sets and electrical items were to be supplied free. ICF's manufacturing cost was adjusted after accounting for the value of these free supply items and the rate of Rs.0.73 crore per set¹ of AC EMU was incorporated in the contract. M/s Jessop and M/s BEML, however, represented that the contract prices are unremunerative and these should be increased upward. Railway Board increased the price provisionally to Rs.121.74 lakhs per set and appointed a Pricing Committee in February 1998, for working out the final price of AC EMUs. The Pricing Committee recommended (April 1999) contract prices of Rs.1.60 crore for BEML and Rs.1.67 crore (later revised to Rs.1.64 crore) for Jessop as against ICF's cost of Rs.1.39 crore. Jessop was given higher price due to difference in design of the coaches. The rates were updated and the orders were placed on the firms till 2001-02. The Pricing Committee also recommended that cost parameters and the price variation formula should be reviewed once in three to five years.

Since revisiting the costing aspect in a comprehensive manner was likely to take time, the Appreciation Committee of Eastern Railway suggested that the prices recommended by the earlier Pricing Committee (April 1999) with PVC should be extended for 2004-05 and 2005-06 wherein cost of additional material of revised specification should also be taken into account. Accordingly, the Appreciation Committee recommended (24 August 2005) awarding the rate of Rs.2.00 crore for Jessop and Rs.1.97 crore for BEML per AC EMU with additional cost of Rs.0.16 crore for materials of new specification. The Board accepted the recommendations of the Appreciation Committee on 6 September 2005. In this connection, audit observed the following:

- The rates offered to the firms in September 2005 were calculated by simply updating the rates as per the PVC formula without excluding the cost of two elements (i.e. working capital finance and profit) though the Board had clearly expressed its disagreement. In a similar case of price for GSCN coaches on M/s BEML for the year 2004-05, the elements of

¹ set consist of 1 Motor coach 'B'+ 1 Trailor Coach 'C'+ 1 Trailor Coach 'D'

working capital finance and profit were not approved by the Board/ Minister for Railways.

- As per the provisions of the earlier contracts, 90 per cent payment was released in six stages on submission of Inspection Certificate on completion of each stage and Indemnity Bond covering cost of sub assemblies which remain in the physical possession of the supplier. The remaining 10 per cent was released on delivery of the coach and submission of bond indemnifying the railways against damage/defects. However, in the contracts placed in December 2005/January 2006 for production of AC EMU coaches in the year 2005-06, Railway Board allowed advance payments for the value of components procured by the contractor on behalf of the President of India subject to the ceiling of 50 per cent of the total cost of the coaches ordered.
- The production capacity of RCF and ICF is sufficient to meet the requirement of coaches of Indian Railways. In March 1995, while requesting for orders for coaches on BEML, the Ministry of Defence had given a commitment to match the prices of Railways' Production units. Awarding the contract at rates higher than ICF's cost was not justified.

Thus, payment on account of working capital finance and profit which were not agreed to in principle for inclusion in the cost of coaches by the Board Members was unjustified in view of the fact that advances and stage payments were made to the firms. The rates awarded were higher by Rs.0.15 crore and Rs.0.16 crore per coach in case of BEML and Jessop respectively. Awarding of the contract at higher rates resulted in excess payment of Rs.7.97 crore.

The matter was brought to the notice of Railway Board in July 2007; their reply has not been received (December 2007).

4.1.5 Integral Coach Factory: Wasteful expenditure on production of two vehicles

RDSO rejected a safety system due to deviations from the approved specification resulting in wasteful expenditure of Rs.4.80 crore on the production of two vehicles manufactured for carrying the systems
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Self Propelled Ultrasonic Rail Test (SPURT) car is an important tool for ultrasonic testing of rails for detecting defects and for taking preventive maintenance action to forestall accidents occurring due to rail fractures. SPURT car consists of an ultrasonic system, a carrier vehicle and other measurement systems.

RDSO, Lucknow floated and finalised under the supervision of the Railway Board a Global Tender for the design, manufacture and supply of two SPURT cars and placed an order (December 2003) on an Israel based firm. The firm entered into a contract with M/s Rail India Technical and Economic Services (RITES), a public sector undertaking, for supplying two vehicles for carrying the systems. M/s RITES placed order on ICF for manufacturing of the vehicles. However, no formal agreement was entered into between M/s RITES and ICF. As per order, the firm had to bring the ultrasonic system and other

equipment to Integral Coach Factory (ICF), Chennai, assemble them in ICF on the carrier vehicles and then despatch the full system to RDSO.

ICF manufactured (March 2005) the carrier vehicles on which the Ultrasonic equipment was installed in May 2005. However, RDSO, rejected (September 2006) the Ultrasonic systems after conducting several field trials as equipment supplied were not of approved specifications. The carrier vehicles alongwith rejected ultrasonic equipment is stabled in the RCF as these are of no use to Railways. Member Engineering (ME) has observed that in view of the failure further procurement may not be made and Railway may go for Sperry sort of system like in advanced countries.

ICF received an advance payment of Rs.0.46 crore and balance payment of Rs.4.69 crore (excluding Excise Duty) claimed by the ICF in May 2005 remained unpaid (March 2007). RDSO invoked the Bank Guarantees of the firm valuing Rs.13.11 crore against total amount of Rs.11.59 crore paid to them. Monetary settlement done by RDSO may not be final as the firm has filed a suit in the Court.

Thus, rejection of ultrasonic systems for SPURT cars by Railways has resulted in wasteful expenditure of Rs.4.80 crore on production of two carrier vehicles manufactured by ICF.

The matter was brought to the notice of ICF Administration in January 2007 and they stated (September 2007) that utilistation of carrear vehicles for alternative purpose was under consideration of Railway Board. Facts remains that expenditure incurred by ICF has not been fully realised. Even if these vehicles are to be used for alternative purposes, modifications involving additional expenditure would be required.

The matter was brought to the notice of Railway Board in October 2007; their reply has not been received (December 2007).

4.1.6 Railway Board: *Extra expenditure due to procurement of Grease seals and CTRBs on higher rates*

Failure of the tender committee to negotiate to the best advantage of the Railway resulted in extra expenditure of Rs.3.12 crore on procurement of Grease seals and CTRBs.
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Global tender (GP-206) for procurement of Grease seals and Cartridge Tapered Roller Bearings (CTRBs) required for wagon production and maintenance during the year 2006-07 was opened on 28 March 2006. Review of the tenders and award of contracts revealed the following:

Grease seals

Five firms participated in the tender. The lowest offer was received from M/S National Engineering Industries (NEI) Jaipur at unit rate of Rs.400 (all inclusive). Tender Committee compared the lowest rate (Rs.400) with the last purchase rate Rs.434.7 and recommended negotiation with the lowest tenderer. Post negotiation, the rates were reduced to Rs.394.20 and these rates were counter offered to other firms. Orders were placed at this rate with four firms.

Audit observed that the grease seals to be supplied by M/S NEI were to be imported from its principal M/s BRENCO/USA. The cost break up given by the firm indicated that the cost inclusive of all levies on import was Rs.268.76. After adding all incidental charges, freight, CST and profit margin as per the limits prescribed by the Railway Board, the total cost works out to Rs.332.60. Thus, the purchase at the rate of Rs.394.20 resulted in extra expenditure of Rs.2.13 crore on procurement of 3,46,046 nos. of grease seals.

When the matter was taken up with the Railway Board, they stated (August 2007) that it is not possible to finalise a tender by working out the rate considering any percentage of departmental /incidental charges and assumed profit. The Railway Board's contention is not acceptable. In the ATN on Para No. 4.1.1 of RAR No. 8 of 2005 on "Extra expenditure on purchase of imported material" it has stated that in case of direct import by the railways, elements like departmental charges-12.5 per cent, freight charges-5 per cent, incidental charges-2 per cent would have to be incurred by the railways in addition to absorbing foreign exchange variation. Further as per its own instructions of 16 November 1982, agency commission should not exceed 5 per cent in the normal course. The lower rate of Rs.254.39 (all inclusive) per grease seal offered by the indigenous firm M/s SKF in the subsequent tender (opened in March 2007) supports audit's contention that there was scope for further reduction in rates. Regarding placing of an order for imported grease seals with M/s Timken India, Railway Board stated that the firm is a subsidiary of M/s Timken/USA and order was placed on the firm in Indian rupees otherwise price counter offered was to be converted in equivalent FOB price in USD. It further stated that the firm's products are acceptable against work test certificate. Railway Board's reply does not specifically address the point as to how an order was placed on the firm for an item not quoted by it.

Cartridge Tapered Roller Bearings

The lowest offer was received from M/s FAG/Vadodara at a unit rate of Rs.8390 (exclusive of taxes and duties). Tender Committee recommended counter offering the lowest rate of Rs.8390 to the other firms. The firms accepted the counter offer and contracts were placed on them.

Audit observed that the lowest rates quoted by M/s FAG/Vadodara included Rs.310 on account of cost of Side Frame, Key Bolt, Washer & Nut with Split Pin, Axle End Cap, Axle End Cap Screws and Locking Plate etc for which M/s Timken India Limited had quoted Rs.224. Considering the difference lowest rate worked out to Rs.8,304 per CTRB as against accepted rates of Rs.8,390. Railway Board's failure to analyze the rate difference in accessories resulted in extra expenditure of Rs.0.99 crore on procurement of 95,008 CTRBs.

When the matter was taken up with the Railway Board (June 2007) they stated (August 2007) that it is not possible to finalise a tender by working out the rate considering any percentage of departmental or incidental charges and assumed profit. The Railway Board's reply is contradicting its own acceptance in the ATN on Para No. 4.1.1 of RAR No. 8 of 2005 that in case of direct import by the railways, elements like departmental charges-12.5 per cent, freight

charges-five per cent, incidental charges-2 per cent would have to be incurred by the railways in addition to absorbing foreign exchange variation. Further as per its own instructions of 16 November 1982, agency commission should not exceed five per cent in the normal course. The lower rate of Rs.254.39 (all inclusive) per grease seal offered by the indigenous firm M/s SKF in the subsequent tender (opened in March 2007) supports audit's contention.

As regards procurement of CTRB it was stated that they consider all items as single assembly and it would not be justified to go into the prices of elements. They also added that these rates were by far the lowest received till date, and counter-offering of the worked out rate is generally not followed except where it is proven beyond doubt that the lowest quoted rate is not a reasonable rate. The reply is not tenable. The reasonableness of the rates was worked out merely on the basis of the last purchase rates. Since lowest rates quoted by the firm M/s Timken for side frame etc were available, these rates should have been taken into account, negotiated further and counter offered to other tenderers.

Thus, failure of the tender committee to consider all aspects of prices quoted by different tenderers and analyse the rates properly, led to extra expenditure of Rs.3.12 crore on procurement of grease seals and CTRBs.

4.1.7 Northern Railway: Loss due to poor contract management

Delay in finalising drawings, Quality Assurance Plan (QAP) and Welding Procedure Specifications (WPS) resulted in avoidable payment of Rs.1.47 crore on account of price escalation. Besides, non-utilisation of wagons resulted in loss of earning capacity of Rs.2.35 crore

Railway Board had been emphasizing the need for improving the pay to tare ratio of the wagons and reduce incidence of corrosion in their body since 1989.

Research Designs and Standards Organisation (RDSO) designed (1997) a light weight BOXN wagon (BOXNLW) justifying extra earning of Rs.59,694 per annum per wagon on account of increase (three per cent) in through put compared to BOXNHS/BOXNCR wagon. The detailed specifications of BOXNLW were finalised in July 2002.

Based on above specifications, Railway Board placed (March 2003) an order on a firm to supply 250 BOXNLW wagons at a total cost of Rs.14.34 crore. As per agreement, the firm was to supply two 'Prototype Wagons', within 3 months of award of contract. Of these, one wagon was meant for conducting squeeze load test at the manufacturer's premises and the other was to be sent to RDSO for conducting oscillation trials. The regular supply was to commence after obtaining clearance of prototype wagon from RDSO.

Audit observed that the supply of steel items, required to be supplied to the manufacturer by the Railways, commenced only from February 2004. It was also noticed that though the drawings were approved by RDSO in October 2003, the QAP and WPS were approved only in February 2004 and thereafter

some technical changes in BOXNLW wagons were communicated (March 2004) to the manufacturer.

The firm offered (June 2004) two prototype wagons to RDSO for squeeze load testing and oscillation trials and requested RDSO to allow Finite Element Modeling (FEM) analysis in lieu of squeeze load test stating that it was a more accurate and technically acceptable test. Though RDSO accepted (June 2004) the firm's proposal, the FEM analysis was made available by the firm only in February 2005.

In the meantime, RDSO had requested (February 2004) the Northern Railway to obtain sanction of Commissioner of Railway Safety (CRS) for conducting detailed Oscillation trial of BOXNLW wagons. The provisional and final speed certificates were issued by RDSO in March 2005 and December 2005 respectively.

The firm supplied 23 wagons during July 2004 to June 2005. The inspection certificates were issued by RDSO in June 2005 and the wagons were handed over (September 2005) to Eastern Railway for onward dispatch to East Coast Railway. After supplying two more wagons further supply was stopped in October 2005. In the meantime the firm had requested (February 2005) the Railway Board to extend the delivery period without levy of liquidated damages and also to allow price escalation as the prices of all input components had increased. They also attributed the delay to RDSO.

Railway Board allowed (May 2006) price escalation and extended the delivery period up to 30 November 2006 without liquidated damages and denial clauses. Thereafter the firm supplied another 50 wagons during October 2006 to April 2007. However, these wagons were not taken over by the Eastern Railway and are lying idle in Kolkata Port Trust Yard. Total detention to these wagons works out to 5400 wagon days as on April 2007. Till April 2007, the firm had supplied a total of 75 wagons against the ordered quantity of 250 wagons.

In the above context the following audit observations are made:-

- (i) Delay on RDSO's part in finalising drawings of wagons, approval of QAP and WPS, issuing speed certificate coupled with late supply of required steel material to firm led to avoidable payment of Rs.1.47 crore on account of price escalation.
- (ii) Delay in issue of inspection certificate by RDSO, led to idling of 23 wagons for 6,560 wagon days during July 2004 to September 2005 and consequential loss of earning capacity of Rs.1.29 crore.
- (iii) 50 wagons worth Rs.7.57 crore, supplied during October 2005 to April 2007, were not taken over by Eastern Railway and are idling in Kolkata Port Trust Yard. The consequential loss of earning capacity of these wagons for 5400 wagon days amounted to Rs.1.06 crore.

Thus, poor contract management besides avoidable payment of Rs.1.47 crore on account of price escalation resulted in abnormal delay in handing over the wagons causing loss of earning capacity of Rs.2.35 crore.

The matter was taken up with RDSO Administration in May 2007. They stated (July 2007) that the delay was on account of revision sought by RDSO from the firm on the manufacturing drawings and WPS. The reply is not acceptable because the facts remain that Railway Administration has not been able to achieve the objective of improving pay to tare ratio by introducing the BOXNLW wagons on the network of Railways even after the lapse of 10 years since the wagon was first designed.

The matter was brought to the notice of Railway Board in October 2007; their reply has not been received (December 2007).

4.1.8 North Eastern Railway: Loss on procurement of ballast at higher rates

Railways inaction during the procurement of ballast for track renewal works resulted in loss of Rs.2.33 crore

North Eastern Railway had set a target of procuring 50,000 cum ballast (machine or hand broken whichever was economical) for Ramnagar Depot of Izatnagar Division during the year 2004-05. Accordingly a contract for manufacturing, supplying and stacking of 20,000 cum hand broken track ballast at the rate of Rs.290/- (cost of ballast 120/- + cartage and stacking Rs.130/- and loading of ballast to all types of wagons Rs.40/-) in Ramnagar quarry and loading of the same in all types of Railway wagons was awarded to a contractor in June 2004. The whole quantity was to be supplied within six months.

Audit scrutiny of records revealed that the agreement was entered in December 2004 i.e. six months after the acceptance of tender and the same day, the contractor applied for the extension of date of completion up to July 2005 on the ground of non-availability of stones required for ballast due to closure of river. Though it is a well known fact that the river remains open from October to June every year for extraction of stones, the Railway accepted the request and extended the completion period up to May 2005. The work was started by the contractor from 15 October 2004 and during the course of execution he complained (May 2005) that the space provided for stacking was insufficient. The contractor supplied only 1, 254.899 cum ballast [6.2 per cent of total contracted quantity], valuing Rs.3.60 lakh and expressed his inability (May and June 2005) to supply the remaining quantity. He therefore, requested to cancel the contract on administrative grounds.

Consequently, to meet the demand of ballast for CTR and safety works, the Railway Administration placed demands(s) with other divisions of the North Eastern Railway and other Zonal Railways through Chief Engineer, Gorakhpur. The Railway Administration procured 18745 cum ballast at a cost of Rs.2.88 crore from Jhansi Division of North Central Railway, and Lucknow and Varanasi Divisions of North Eastern Railway from September 2005 to December 2006 at higher rates resulting in loss of Rs.2.33 crore.

Thus, the objective for achieving the target of ballast procurement at economical rates was defeated. Had Railway Administration exercised due care to avoid delayed execution of agreement, ensure availability of sufficient

stacking place and provided wagons timely, extra expenditure of Rs.2.33 crore could have been avoided.

The matter was brought to the notice of Railway Board in September 2007 and they accepted (December 2007) that if sufficient stacking space and wagons had been provided, the contractor would have been able to supply the contracted quantity. However, they maintained that an increase in space was not possible for them due to hilly terrain. They also added that even after repeated chasing wagons could not be supplied. Therefore, such failure has occurred under unavoidable circumstances. Railway Board's contention is not acceptable as the constraints regarding stacking space and non-availability of wagons due to their scarcity were known to them before tendering and entering into agreement.

4.1.9 North Eastern Railway: Injudicious procurement of ballast

Due to finalization of contracts for ballast procurement in total disregard of the laid down procedure, Railway Administration incurred loss of revenue to the tune of Rs.0.99 crore
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As per RDSO's specification of January 1999, machine crushed ballast should be used for gauge conversion works. The survey conducted by RDSO in February 2004 indicated availability of such ballast.

In order to meet the requirement of ballast for gauge conversion of Gorakhpur-Nautanwa (80 kms.) section, North Eastern Railway invited seven open tenders in April/ May 2004 for procurement of 90,931 cum of ballast on cess. Accordingly supply orders worth Rs.7.97 crore were released in 2004. Against the ordered quantity of 90,931 cum, 47,191.726 cum of ballast costing Rs.4.21 crore was received between July 2004 and October 2005 and thereafter the contracts were terminated on account of paucity of funds during 2005-06.

Scrutiny of records revealed that contrary to RDSO's specification for procurement of machine crushed ballast, hand broken ballast was procured from unspecified source (the ballast was procured from Nautanwa, a border town of Nepal, where there is no quarry at all). It was also observed that Railway Administration had neither compared the rates with the last accepted rates nor carried out any rate analysis of the rates quoted by contractor. The rates accepted for supply of ballast at Nautanwa were Rs.175, Rs.200 and Rs.250 per cum of ballast including the cost of transportation (upto 5 kms. inside the Indian territory) as against the last accepted rates of Rs.104 per cum (February 2004) and Rs.120 per cum (June 2004). This has resulted in loss of revenue to the tune of Rs.0.99 crore [Rs.0.42 crore towards procurement of ballast from unspecified sources (+) Rs.0.57 crore towards cost of transportation].

When the matter was taken up (June 2007), the Railway Administration stated (August 2007) that hand broken ballast was procured due to non-availability of machine crushed ballast. As regards procurement of ballast from un-approved source, it was stated that the ballast was manufactured inside Nepal and transported to Nautanwa which was purchased by the local agencies for

further transportation to Indian territory. Regarding the quality of ballast, the Railway Administration stated that the same was checked in the technical lab of Government Polytechnic and Geo-tech lab of Railways. These arguments are not acceptable because machine crushed ballast was available with the same agencies from where the quotation was taken for hand broken ballast. The award of contract for procurement of ballast from an un-approved quarry was also against the criteria of tender notice.

Thus, procurement of 47,191.726 cum of hand crushed ballast from un-approved quarry resulted in loss of revenue to the tune of Rs.0.99 crore during the period July 2004 to October 2005.

The matter was brought to the notice of Railway Board in October 2007; their reply has not been received (December 2007).

4.1.10 East Coast Railway: *Avoidable extra expenditure in procurement of signaling materials through works contracts*

Railway's failure in periodical revision of schedule of rates to bring them at par with the prevailing market rates resulted in inflated estimation and extra expenditure of Rs.2.41 crore in obtaining material through work contracts

Rules provide that to facilitate preparation of estimates, schedule of rates maintained in each Divisional office for each kind of work commonly executed should be periodically revised to bring them at par with the prevailing market rates.

The contracts involving supply of materials and execution of works where material portion is more than 51 per cent of the total value of the tender/contract, are termed as Material Intensive Contracts (MICs). The basic principle underlying awarding of such contracts is that the work should be completed in time as stipulated.

Scrutiny, of 10 tenders invited during 2003 for the work contracts in connection with the work of 'Design, supply of critical stores, installation and commissioning of centralised operation of points and signals by Panel Interlocking and associated Telecom works at various stations' revealed that estimates were prepared based on the last purchase rates without rate analysis and taking into consideration the prevailing market rates resulting in inflated estimation. The works contractors procured the items of stores direct from the manufacturers and supplied to the Railway.

Review of five out of the above ten tender cases disclosed that actual amount paid to the contractors for items of stores, in respect of which invoices made available to audit, were far in excess of the expenditure incurred by the contractors. Avoidable extra expenditure was assessed in audit to the extent of Rs.2.41 crore due to adoption of higher rates on the basis of last accepted rates (LAR) which were not periodically revised in line with prevailing market rates.

An analysis of the Railway's estimated rates, contractor's accepted rates and original manufacturer's rates revealed that on an average Railway's estimated

rates were 41 per cent higher than the prevailing market rates. The rates finalised were 37 per cent higher than the market rate and the contractors were paid accordingly. Further in four out of five cases reviewed, contractor's accepted rates were also higher than Railway's estimated rates.

The Tender Committee accepted higher rates than the LAR/ PO (Purchase Orders) rates on the ground that contractor would have to pay works contract tax and state entry taxes relating to supply of materials.

In this connection following audit observations are made:

- (i) Railway failed to prepare estimates after proper rate analysis taking into consideration the prevailing market rates of various items of stores to be supplied by the works contractors. Railway Administration estimated and TC accepted quoted rates of the works contractor solely on the criteria of LAR which were much higher than the prevailing market rates and even higher than the estimated rates in four out of the five cases reviewed.
- (ii) The basic principle underlying award of MIC was to complete the work in time as stipulated (six to ten months). The objective was defeated as the works were much behind schedule (two to four years).

When the matter was taken up (September 2007) with the Railway Board, they stated (November 2007) that it is not correct to state that non-revision of rates periodically or non-adoption of rate analysis in the awarded contracts led to loss or extra expenditure of Rs.2.41 crore in obtaining material through work contracts. LAR/ LPRs received from open tenders have been adopted as the basis of departmental estimation and the participating tenderers quoted their rates in the most competitive manner best of market assessments. Further, by combining material portion and works portion in the contract, Railway's intention was to get the work executed at the earliest as well as to have better co-ordination for execution.

Railway's contention is not acceptable. The so called competitive rates were found to be much higher than the prevailing market rates. Moreover, the logic of better co-ordination for execution as put forth by Railway for inclusion of supply items in works contracts also proved to be incorrect as none of the works could be completed within the stipulated contract period.

Thus, Railway's failure in periodical revision of schedule of rates to bring them at par with the prevailing market rates resulted in inflated estimation and extra expenditure of Rs.2.41 crore in obtaining material through work contracts.

4.1.11 North Eastern Railway: Loss due to procurement of short length rails

Failure of Railway Administration to place the requisition for 26 metre long rails instead of 13 metre rails led to avoidable expenditure of Rs.1.45 crore towards cost of welding of short rails

Rails are procured from Steel Authority of India Ltd., Bhilai (SAIL) for use in conversion, doublings and new lines projects on the basis of requirement and requisition placed by the Railways on Railway Board. The rails meant for

North Eastern Railway are stocked in Gonda and after welding in Flash Butt Welding Plant are sent to the project sites.

Audit scrutiny of records revealed that though SAIL manufactures and supplies 13, 26 and 65 metre long rails Railway procured only 13 metre rails. The short welded rails were used in the projects at site by joining ten or more pieces of 13 metre rails.

Thus, had the requisition of 26 metre long rails instead of 13 metre been placed by the Railway Administration, the expenditure of Rs.1.45 crore towards the cost of welding additional joints during last seven years could have been avoided.

When the matter was brought to the notice of Railway Administration in January 2007, they stated (March 2007) that Railways send their yearly requirement in metric tonne to Railway Board. The length of rails to be supplied to respective Railways is decided by Railway Board on the basis of Rolling Stock Programme of the SAIL. They further added that in case 26 metre long rails were supplied necessary modification were required to be made in the existing plant for handling the rails, as the plant is equipped for welding 13 metre rails only.

The reply is not tenable. It has been accepted by Railway that long welded rails panel up to 260 meter length (20 rails x 13 meter) can be handled in the plant and a few rakes of 26 metre long rails were in fact handled in the past. In view of this, it would have been possible to weld/handle same length of rail panel in 10 rails of 26 metre length. It is further seen that rails of 26 metre length have been received at FBWP, Gonda for other Railways. As regards allotment of rails by the Railway Board, they could have requisitioned rails of 26 metre length to avoid the cost of additional welding.

The matter was brought to the notice of Railway Board in October 2007; their reply has not been received (December 2007).

**4.1.12 South Central, Southern and: Avoidable expenditure due to
South Eastern Railways indirect purchase of
equipment**

Instead of direct purchase from the manufacturers, construction organisations procured the equipments through works contractors at higher rates resulting in avoidable expenditure of Rs.1.77 crore

Switch Mode Power supply System (SMPS) based Integrated Power system (IPS) provides complete power solutions for Panel Interlocked stations in non-electrified track and continuous supply, both AC and DC, to the signaling circuit.

Signalling and Telecommunication Department of Construction Organisation of South Central Railway, while undertaking the work for the improvement of the existing Signalling System on the Railway, decided to install SMPS based IPS sets. RDSO finalised the specification and recommended that the manufacturer of the system should also install and commission the equipments and forwarded a list of approved manufacturers for placing educational orders. Supplying, installing and commissioning of IPS were an independent item of work irrespective of its relation with any other work.

Construction Organisation awarded contracts for the execution of works for provision of panel interlocking at new crossing stations, signaling arrangements at doubling of track and rehabilitation/renewal of signaling gears. These contracts had two parts viz. supply and labour. SMPS based IPS was included in the supply portion of the contracts. Contractors procured the item from the manufacturers who also installed and commissioned the IPS for the contractors.

Audit review of 22 contracts for supply of 45 systems awarded during 2003-04 to 2005-06 revealed that as against the advertised rates ranging from Rs.7.73 lakh to Rs.8.71 lakh per set, the rates actually quoted and accepted ranged from Rs.7.42 lakh to Rs.8.94 lakh per set. The rates at which the contractors procured the IPS sets from the manufacturers ranged from Rs.4.51 lakh per set to Rs.5.75 lakh per set only.

Thus, the payments made by the Construction Organisation to the contractors for the supply of IPS were much higher than the actual amount paid by the contractor to the manufacturers. This excess expenditure was due to adoption of higher rates in the tender schedule at the initial stage by the Construction Organisation. Audit noticed that Controller of Stores (COS) had purchased this item for open line at rates ranging from Rs.5.55 lakh and Rs.5.10 lakh per set in November 2003 and November 2004 from approved sources.

Construction Organisation ignored the instructions of RDSO to get the IPS systems procured, installed and commissioned from the manufacturer and got it done through contractors. Due to award of the contracts for IPS on the contractors, instead of manufacturers of the IPS, South Central Railway incurred avoidable expenditure of Rs.1.23 crore.

Similarly, Southern Railway (SR) and South Eastern Railway (SER) purchased 20 IPS systems through contractors during the years 2003-04 to 2005-06 resulting in avoidable expenditure of Rs.0.54 crore (SR-Rs 0.22 crore and SER- Rs.0.32 crore).

On this being taken up by Audit (January 2007), Construction Organisation stated (April 2007) that rate revision is done periodically at an interval of four to five years. However, the rates were justified on an over all basis considering base rates and market fluctuations. Construction Organisation's arguments are not acceptable in view of the fact that the rates quoted in the tender schedules were not representing the current market trends. Even the rates available with the COS for purchases for open line were not considered.

The matter was brought to the notice of Railway Board in October 2007; their reply has not been received (December 2007).

***4.1.13 South East Central : Improper planning in procurement
Railway of stores***

Injudicious procurement of signal and other equipment without considering their technical utility to specific work, led to idling of equipment and unproductive expenditure of Rs.1.10 crore
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Rules provide that all stocks of stores represent funds that are not productive. While stocks should be such that stores required by the Railways are readily

available they should be as small as possible, and losses due to obsolescence or deterioration should be minimum practicable. Further, purchase of non-stock items for stock purchase should not be made.

The Signal and Telecom department of Construction Organisation of the erstwhile South Eastern Railway procured the following equipment during the year from 1999 to 2006 for specific purposes in some works/ projects, but failed to utilise them fully till date (April 2007) resulting in idling of equipments worth Rs.1.10 crore. A brief of the status of these equipments is as follows:

Universal Double Line Axle Counter sets

Six sets of the above equipment were received in December 1999 against the purchase order placed in May 1999. Out of these, five sets could not be installed as the required block section for installation of the equipment could not be identified due to technical and administrative reasons. Thus five sets costing of Rs.0.39 crore are idling and prospects of their usage in future are remote as such equipment are banned by the Railway Board in September 2005.

Axle Counter Block Single Line (ACBSL) – Three sets

Axle Counter Block Double Line (ACBDL) – Two sets

High Frequency Track Circuit (HFTC) – Eight

The above equipment was procured in October 2002, February 2003 and April 2003 for signaling works at Gatora, Jairamnagar and Raigarh. However, Railway Board imposed ban (September 2005) on installation of Block Panel as reliable Block proving Axle Counter was yet to be developed. Scrutiny of records with regard to utilisation of these equipment revealed that Gatora station was commissioned in February 2007 without ACBSL. The Railway Administration decided to install this equipment on non-important goods sidings and installed one ACBSL at Kargi Road and has planned to install another one at Korba-Balco section. The third one has been kept as maintenance spare. Out of two sets of ACBDL, one was installed in May 2007 where similar system already exist and the remaining one kept as spare. HFTCs were procured for installation at Gatora and Jairamnagar. However, this equipment were meant to provide track circuit at locations where there was shortage of glued joints and as such were used only in selected applications. Gatora was, therefore, commissioned without HFTC as there was no shortage of glued joints. Railway has now planned to install six equipments at non-important sidings and keep the balance two as spare. Thus failure of Railway Administration to correctly apprehend the prospect and possibility of use of the equipments in the context of frequent change in technology, selective applications for their use led to the non-utilisation of the equipments worth Rs.0.25 crore.

Data Loggers (DLs)

As per guidelines (August 2002) issued by Chief Signal and Telecom Engineer (CSTE) Data Loggers were to be provided separately with

networking section-wise with a facility to monitor the status of the signaling gears from control office at Divisional Headquarters.

During the period from July 2004 to September 2006, 30 DLs and 28 Computer sets were purchased against various Panel Interlocking (PI) and Solid State Interlocking (SSI) works in order to monitor the signaling gears by two modes i.e.

- (i) At individual station in stand alone mode or
- (ii) Remotely from test room through networking.

Review of stock (January and April 2007) of the Signal depot, Construction, Bilaspur revealed that 18 DLs and 5 computers were in stock as on July 2004 and after fresh purchase the total stock of DLs and Computers stood at 48 and 33 respectively. Out of these, 20 DLs and 30 computers were issued during the period January 2005 to April 2007 leaving a balance of 28 DLs and 3 computers. This shows that issue of DLs and computers was not proportionate. As many as 10 computers (without DLs) were issued for the purposes other than committed in the contract schedules of specific works. Since only networked DLs were to be commissioned and net working was not possible due to non-availability of channels, the DLs could not be installed. The Railway Administration decided (July 2005) to install the DLs with the commissioning of PI/ RRI stations. As on date, out of balance 23 DLs costing Rs.0.46 crore, (25 DLs already installed), installation of 18 DLs is getting delayed due to various reasons while 5 DLs are kept as spare.

The matter was brought to the notice of Railway Administration in May 2007 and they accepted (August 2007) the audit contention of unproductive expenditure. Further, they stated that it was beyond their control. The reply is not tenable because proper planning before procurement could have avoided the idling of stores.

The matter was brought to the notice of Railway Board in October 2007; their reply has not been received (December 2007).

4.1.14 Eastern Railway: Avoidable expenditure due to procurement of stores through works contracts

Procurement of stores through Works Contracts in contravention of laid down provisions resulted in avoidable expenditure of Rs.0.99 crore

As the cases of material being procured through work contracts instead of purchasing through stores department were noticed on numerous occasions, the Senior Deputy General Manager, Eastern Railway stressed (September 2005) financial prudence in the procurement of stores through work contracts and directed to ensure that codal provisions for procurement are strictly observed. The purpose of these instructions was to prevent the deliberate violation of existing codal provisions on the justifications of prevailing practice to procure materials through work contracts.

Scrutiny of records, however, revealed that contrary to the above directives the Chief Administrative Officer (Construction) Eastern Railway approved (November 2005) two work contracts for supply of Copper Contact Wires and Copper Catenary Wires for overhead electrification works, instead of procuring them departmentally on the justification that:

- (i) Placing of vetted requisition through Central Organisation Railway Electrification (CORE) and receipt of material is a time consuming process.
- (ii) It was an age old practice.

The following four electrification works were sanctioned in 2000-01 and 2001-02:

Sl.No.	Name of the work	Pink Book item	Procurement of Stores (Copper Contact Wires and Copper Catenary Wires) proposed	Targetted/extended date of completion of work
1	Electrification of New Double line between Bandel-Bansberia	34 of 2001-02	Departmentally	March 2006
2.	Electrification of New Double line between Krishnanagar- Badkulla	32 of 2000-01		28 February 2006
3.	Electrification of New Double line between Diara-Singur.	30 of 2000-01	Through Works Contract	September 2006
4.	Electrification of New Double line between Champahati-Ghutiarihariff.	15 of 2000-01		November 2006

Though these works had appeared in the Pink Book (2000-01) and the Railway had ample time to procure the materials through CORE, they initiated the procurement of materials only in 2005 and citing urgency for timely completion of the work as a reason procured the stores from an outside agency. This was a deliberate departure of the codal provisions as well as SDGM's directions. Normally 15 months are required for procurement and supply of material through CORE.

It was also noticed that Copper Catenary Wire 65 Sq.mm for three other electrification works (Chitpur Terminal, DD line at Chitpur, and Habra-Machhlandpur Section) was also procured through works contracts during the period from October 2004 to January 2006.

A detailed analysis of the two rates at which the stores were procured through Works Contract during October 2004 to January 2006 and the rates at which the stores were procured by CORE centrally during the period from February 2005 to September 2006 revealed that an additional expenditure of Rs.0.99 crore was incurred in the above five cases.

The matter was brought to the notice of Railway Board in October 2007 and in their reply they accepted (November 2007) the additional expenditure of 0.99

crore. However they further contended that the total additional costs which are required to be included while computing the economics of the purchase action through stores was not considered by audit. There is a gain due to early completion of project which would have otherwise been delayed due to non-availability of contact wire and catenary wire and whatever money spent in the project would have remained idle. Railway's contention regarding additional cost involved for computing economics is not acceptable as no papers justifying their claim were furnished to audit. Audit has pointed out the deviation of Rules and orders in procurement of stores. Such deviations and deliberate violation of codal provision and SDGM's order in the matter led to additional expenditure of Rs.0.99 crore.

4.1.15 Metro Railway: *Avoidable expenditure in the procurement of stores*

Failure of the Railway Administration to lift material within the validity period and consequent purchase at a higher cost led to avoidable expenditure Rs.0.97 crore

Metro Railway, Kolkata decided (January 2004) to procure 2239 MT of 32 mm dia Steel TMT CRS/HCR re-bars for several on going construction projects and placed a purchase order (9 February 2004) on M/s SAIL for supply of 2015 MT of steel at a cost of Rs.25,200 per MT. As per accepted conditions the material was to be delivered immediately from Ex-Stockyard Dunkuni on or before 31 March 2004.

Audit scrutiny of records revealed that despite several requests by the supplier to lift the material before 31 March 2004, Railway collected only 442 MT of the steel and the remaining quantity of 1573 MT was not lifted citing space constraints in Depot and slow progress of the works as reasons. The currency of the supply order thus expired on 31 March 2004 and SAIL did not agree to extend the currency.

In order to meet its requirement of steel Metro Railway placed three orders within three to five months (June 2004 to August 2004) on M/s SAIL and M/s TISCO for supply of 1797 MT of steel at a much higher rate (500 MT @ Rs.29,990 and 1297 MT @ Rs.30,888). Out of these, 1779.59 MT of the material were received by the Railway at a total cost of Rs.5.45 crore resulting in extra expenditure of Rs.0.97 crore.

Thus, failure to take advantage of the lower prices against M/s SAIL's order and tardiness in lifting material resulted in an unnecessary extra expenditure of Rs.0.97 crore.

When the matter was brought to the notice of Railway Administration (March 2007), they stated (May 2007) that as the transport contract for lifting the materials was finalised and awarded on 19 March 2004, they could take delivery of 442 MT only with their best efforts. They attributed the low drawal of material to space constraints and stated that it would not have been appropriate to stock full quantity at open space during rainy season.

The reply is not acceptable. Despite the short time available for taking delivery i.e. 52 days, Railway took as long as 42 days merely to finalise the transport contract. Moreover, the argument that stocking was not possible in open due to rainy season is also not a valid reason for non-lifting of the material because the supply against the subsequent orders placed at higher rates was received during June to September 2004 i.e. when the monsoon season was in full swing. It is therefore, evident that there was lack of proper planning which entailed loss to the Railway.

The matter was brought to the notice of Railway Board in June 2007; their reply has not been received (December 2007).

4.1.16 East Coast Railway: *Extra expenditure due to cartel formation of RDSO approved firms*

Failure of the Railway Administration in breaking cartel formation of RDSO approved firms and resultant procurement of brake blocks at higher rates led to avoidable extra expenditure of Rs.0.67 crore

Railway Board's orders (August 2002) stipulate that if the approved vendors are taking undue advantage of Railway's policy of bulk quantity procurement only from approved sources, Railways should report the details of such firms found involved in forming cartels to RDSO for considering down gradation/deletion of names of such firms from list of approved sources.

Carriage Repair Workshop (CRW), Mancheswar (MCS) sent (May 2005) an indent for 36,784 'K' type composite Brake Blocks to Controller of Stores/Bhubaneswar and sought for (September 2005) emergent procurement of the material citing critical stock position of 2600 units which could last for about a month.

Emergent procurement through Limited Tender (EPLT) was approved on 19 September 2005 for 6720 units (i.e. 3 months' projected requirement) and 30,064 units through open tender. Tenders were invited (21 September 2005) from five RDSO approved firms for 6720 units. All the firms responded and lowest all inclusive rate of Rs.423.40 per unit was offered by one. The offered rate was 38 per cent higher with reference to Last Accepted Rate (LAR) of South Eastern Railway and the firms did not agree to reduce it further. Therefore, on the recommendations of Tender Committee, Purchase Orders were placed (19.12.2005) on offered rates.

Audit scrutiny of records of CRW/MCS and Khurda (KUR) Division disclosed that stock position of the material as on 16 September 2005 was 6588 units (KUR Division 3988 + CRW 2600) against an estimated monthly consumption of 2241 and was sufficient to cover requirement of almost three months. Hence, the urgency projected was artificial and EPLT action was not warranted. It was further noticed that an Open Tender was invited almost simultaneously (26 September 2005) from RDSO approved firms for the purchase of the remaining indented 30,064 brake blocks. The lowest bid was Rs.423.40, similar to the unit rate accepted for 'emergent purchase'. Inviting tender for EPLT and Open Tender at the same time within a gap of four days for the same item was not justified. Firms are not expected to quote different

rates for two tender notices floated at the same time. Due to EPLT purchase, finalisation of Open Tender was delayed.

The Tender Committee (TC) suspecting cartel formation and abnormal high price recommended (21 February 2006) for price negotiation with the first lowest tenderer. However, no fruitful result could be achieved in this regard. The TC in their subsequent proceedings (March 2006) recommended that Railway Board/ RDSO should be informed of the exploitative attitude of RDSO approved firms and to undertake cost analysis and fix probable selling price. The TC did not consider the rates obtained as reasonable and recommended for another round of negotiation. The tender accepting authority, however, rejected the recommendation to have further negotiations.

Though Railway Board and RDSO were informed (March 2006) regarding the suspected cartel formation, the Railway Administration did not pursue the matter to deal with the instant Open Tender and subsequent tender cases and placed (April 2006) two POs on two firms for 24,000 and 6064 numbers respectively in spite of apprehension of cartel formation and pending Railway Board/RDSO's clarificatory orders. The EPLT rate was adopted as LAR for future purchases. Open Tender cases should have been finalized only after specific instruction from Board in this regard. Three more purchases were made subsequently (one in October 2006 for 42406 units at Rs.423.40 and other two in April 2007 – for 45900 units at Rs.423.40 and for 8100 units at Rs.419.77).

Thus due to Railway's failure to prevent cartel formation amongst the RDSO approved firms, they had to incur an extra expenditure of Rs.0.67 crore (assessed in audit after allowing 20 per cent increase in LAR of November 2004 of South Eastern Railway) due to procurement of Brake Blocks at higher (EPLT) rate.

When the matter was taken up (September 2007) with the Railway Board, they while accepting (December 2007) the audit contention as partially correct, explained that procurement was as per:-

- (i) Existing guidelines of Railway Board.
- (ii) Critical stock position of the subject item, which was a long lead safety item.
- (iii) Reasonableness of rate on the basis of available LPRs of various sister Railways.
- (iv) Ensuring competition by floating advertising tender and making reasonable effort through negotiations. Therefore, the loss ascribed by audit is 'notional'.

The reply is not tenable. LARs should not be the only criteria for judging the reasonableness of quoted rates especially in cases where cartel formation was suspected. Railway being regular customer of the subject stock item should have undertaken cost analysis and fixed probable rates.

4.2 Inadequacies in material management

4.2.1. North Western, North : Loss due to excess consumption of Eastern, Central, HSD oil in locomotive East Central, South maintenance Eastern Railways

Failure of the Railway Administration to adhere to the norms fixed for consumption of HSD Oil by Diesel Shed during maintenance schedules resulted in excess of consumption entailing extra expenditure of Rs.12.35 crore

Normal maintenance of the Diesel locomotives is carried out in Diesel Sheds on various Railway Divisions as per the maintenance schedules (trip wise, monthly, quarterly, half yearly, yearly etc.) prescribed by the Railway Board. Railway Board fixed (June 1992) norms for the consumption of High Speed Diesel (HSD) oil for various maintenance schedules. Railway Board revised (February 1999) the periodicity of Major schedules for WDM 2 locomotives from one year to 18 months decreasing the total number of schedules required from 48 to 36. Railway Board further revised the periodicity of 12/18 months schedules to 24 months for different types of locomotives by implementing RDSO's recommendations of June 2003. With this change the number of total maintenance schedule carried out have reduced considerably.

Audit scrutiny of the records maintained by five Diesel sheds on three Zonal Railways for the years 2004-05 to 2006-07 revealed that HSD oil actually consumed on maintenance schedules of locomotives was in excess of the prescribed norms resulting in a loss of Rs.8.24 crore. Railway wise position is as under.

Railway	Diesel Shed	Actual HSD Oil Consumption on maintenance of locomotives (in liters)	Requirement as per maintenance schedule periodicity prescribed by RDSO in June 2003 (in liters)	Excess Consumption of HSD Oil (in liters)	Loss (Rs.in crores)
North-Western	Bhagat ki kothi	1098358	927325	171033	0.42
Central	Kalyan	800900	509550	291350	0.98
	Pune	2275945	1540500	735449	2.38
South Eastern	Kharagpur	1970246	1141791	828455	1.65
	Bondamunda	2579865	1297737	1282128	2.81
TOTAL					8.24

Railway Board had revised the periodicities of the maintenance schedules twice after field trials and RDSO's recommendations. Main objective behind these revisions was better utilization of man and machine and also justified consumption of HSD oil on maintenance works. However, results obtained after the implementation of RDSO's recommendations of June 2003 show no improvement in this regard. Moreover, although periodicity of the maintenance schedules has been revised twice, the annual targets of

consumption of HSD oil fixed for locomotives in the year 1992 remain unchanged.

North Eastern Railway

Monthly consumption of HSD oil at Gonda for the period June 2003 to October 2006 ranged between 513.68 litres to 697.86 litres (except February 2004 when it was 449.61 litres) as against the target of 473 litres fixed by Railway Board and RDSO. This resulted in excess consumption of 1184.93 kilolitres HSD oil worth Rs.2.85 crore.

When the matter was brought to the notice of Railway Administration in April 2007, they stated (July 2007) that revised target by RDSO is just a factual statement and not a policy letter or circular. Further, many other works have been added in schedule maintenance like load box testing in quarterly schedule which resulted in more HSD consumption in quarterly schedule.

The reply is not tenable because revised target fixed by RDSO in consultation with zonal railways and Railway Board is based on actual statistics obtained after extensive trials, which includes all types of shed movements, load box testing etc. and needs strict adherence.

East Central Railway

Review of records of four Diesel Sheds revealed that Shed Fuel consumption Registers (schedule wise and loco wise) required to be maintained were not maintained at Patratu and Mughalsarai Shed has started to maintain this register only from October 2006. Review of Fuel Registers maintained at Mughalsarai, Narkatiaganj and Samastipur Sheds revealed that the consumption of HSD Oil was in excess of the prescribed norms. A total 468730 litres of HSD oil valued at Rs.1.26 crore was consumed in excess of requirement during January 2005 to December 2006.

On the matter taken up, the Divisional Authorities of Mughalsarai Division stated (April 2007) that owing to undue shunting and various repairs carried out simultaneously with schedules led to excess consumption. This contention is not acceptable as target fixed by Railway Board for HSD oil consumption were based on actual shed consumption and included all such shed movements and repairs.

The matter was brought to the notice of Railway Board in September 2007; their reply has not been received (December 2007).

4.2.2 South Eastern Railway: Poor Management of Rolling Stock

Railway Administration suffered an avoidable loss of Rs.35.96 crore towards scrap value of non-enumerated B.G wagons written off from wagon master without making any efforts to locate them
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Railway Board advised (May 1981) all the Zonal Railways that over aged wagons not enumerated in two or more successive censuses should be written off from the wagon master. In July 1983, the Railway Board also instructed that in cases of write off, the capital cost of the wagons should be written back and in the eventuality of any wagons traced subsequently, it should either be

condemned by following the normal procedure or if found serviceable, Board should be advised for its inclusion in the wagon master file.

Subsequently in July 2004, the Railway Board, while reiterating their earlier instructions also issued guidelines to set right the system of updating the wagon master. The guidelines inter-alia stipulated that intimation of condemned wagons pertaining to other Railway's should be sent to owning Railways immediately so that they could update their wagon masters accordingly.

Scrutiny of records of South Eastern Railway revealed that after receipt of Railway Board's order of July 2004, an exercise was done to review the wagon master with the census results of 2002 and 2003. The exercise revealed that 1332 over aged B.G. wagons (771 numbers four wheeler and 561 numbers eight wheeler) were not enumerated in two successive censuses and thus written off from the ownership of South Eastern Railway in November 2004 without any financial concurrence. It was observed in audit (December 2006) that the wagons were written off without taking any action to locate them. Thus the write off of 1332 wagons in a routine manner was neither in order nor within the delegated financial powers of the Railway as the scrap value of these wagons was estimated at Rs.53.96 crore.

It was also observed that the capital cost (Rs.3.84 crore) of only 675 wagons was written back to capital debiting the Depreciation Reserve Fund (DRF). No such transaction was carried out for the remaining wagons as they were stated to have been procured from DRF. Meanwhile, 56 wagons were condemned. The Railway Administration failed to realise the scrap value of Rs.35.96 crore of non-enumerated wagons due to system deficiency for tracing them.

Deputy Chief Mechanical Engineer (Freight) South Eastern Railway, during a discussion in October 2005, stated that:

- (i) as the instruction of Railway Board for writing off the wagons was issued with the concurrence of Finance Directorate of the Railway Board, no further financial concurrence was required
- (ii) the writing off exercise was conducted by the J.A. Grade officer as the representative of Chief Mechanical Engineer (CME) and
- (iii) some other Railways might have condemned these wagons and therefore question of scrap value not being realized did not arise.

The above contention is not tenable because:

- (i) & (ii) the scrap value of 1332 wagons was Rs.35.96 crore and writing off the same required the sanction of Railway Board with financial concurrence of the associate finance of zonal Railway.
- (iii) Neither any advice of condemnation of 1276 wagons nor any advice of credit of scrap value thereof was received from any other Railways. The wagons are not small articles that could go astray leading to non-enumeration. Further the wagons are the lifeline of Railways and utmost importance should have been attached to their custody and accountal. Hence writing off the non-enumerated

wagons without verifying their physical availability is indicative of system deficiency as far as management of rolling stock is concerned.

The matter was brought to the notice of Railway Administration in May 2007; their reply has not been received (December 2007).

4.2.3 *Northeast Frontier: Non-realisation of cost of steel towards Railway wastages due to non-observance of contract conditions*

Failure of the Railway Administration to observe the terms and conditions of the contract has resulted in loss of Rs.5.92 crore towards non-realisation of cost of steel wastages

In June 1989 and March 1991, two contracts regarding fabrication, transportation and erection at site of clear span open web steel girders and bearings were awarded to M/s.Braithwaite Burn and Jessop Company Limited (BBJ), Kolkata. The total face value of the contracts was Rs.48.29 crore.

As per terms and conditions of the contracts, the steel [including M.S. Rounds, cold twisted deformed bars, structural of all shapes and sizes like plates, flats (MS & HTS) etc.] required for the permanent work was to be supplied free of cost by the Railways to the contractors. Further, in order to ensure proper utilisation of steel materials and restrict the wastage to the barest minimum, the following provisions of the contracts were to be followed:

- (i) Seven per cent Steel issued over and above the quantities of steel as recorded in the Measurement Book/ Drawing Office Dispatch Lists was to be deemed a reasonable waste towards rolling margin and wastages including cut pieces and this quantity was to be supplied free of cost. The recovery towards allowable waste of seven per cent was to be made at the normal issue rates of steel to the contractor.
- (ii) For wastages beyond seven per cent (including cut pieces/ scrap), the contractor was to be charged at penal rate as for unaccounted materials i.e. twice the normal rate or the market rate whichever was higher and the materials was to be deemed as contractor's own property.

Though the work commenced on 31 October 1991 was completed on 31 December 1998, the final bill was passed after eight years (March 2007). The delay was on account of reconciliation of material issued and consumed as well as dispute over the unaccounted material lying with M/S BBJ.

Scrutiny of records revealed that Railway issued 38107.538 MT of steel free of cost to M/s.BBJ of which 32017.779 MT was utilised including seven per cent wastage of 2094.617 MT leaving a balance of 6089.759 MT with the contractor. Out of 6089.759 MT, 455.180 MT was returned to the Railways. Railway recovered the cost of 1570.858 MT and auctioned the balance 4063.721 MT. Though Railway was required to recover Rs.2.76 crore for the allowable wastages up to seven per cent limit was (2094.617 MT) they recovered only Rs.0.91 crore leaving a balance of Rs.1.85 crore. It was also noticed that the 4063.721 MT steel which was taken from the contractor

contained off cut pieces to extent of 1872.331 MT. The Railway, instead of recovering the penal rates for this quantity, auctioned it at much lower prices thereby suffered a loss of Rs.4.07 crore (i.e. Rs.5.64 crore recoverable at penal rates minus Rs.1.57 crore realized through auction sale.). Thus non observance of contractual provisions for recovery of cost of allowable waste as well as waste over and above the allowable limit has resulted in loss of Rs.5.92 crore.

When the matter was brought to the notice of Railway Board in September 2007, they stated (December 2007) that recovery against allowable wastages upto 7 per cent at normal issue rate were assessed as Rs.2.77 crore and the same has been affected for recovery from the contractor. As regards audit contention on steel wastages beyond 7 per cent, they claimed that this may have been acceptable if the steel components of required sizes as per drawing were issued to the contractor. In this case, due to non-availability of required size of steel, longer size of steel components available in the market at that time were issued. As such it was not within the control of the contractor to restrict the wastage upto 7 per cent. The wastage beyond 7 per cent was, therefore, unavoidable and was duly accounted for.

These arguments are not acceptable since records indicated that the Railway Administration purchased and supplied steel of the same specification and size as indented for by the contractor. Besides, no record regarding issue of longer size steel due to non-availability of the required size in the market and also the approval of the competent authority, as required for issue such longer size of steel could be found out. The Railway Administration also did not furnish any documentary evidence in support of their statement. It is stated that as per contract provision, surplus steel materials were required to be returned to the Railway and for wastage of steel materials (upto 7 per cent and beyond 7 per cent), recovery at normal issue rate and at penal rate was to be enforced. The Railway Administration, however, failed to recover the amount towards the steel wastage (upto 7 per cent and beyond 7 per cent) generated in normal course of execution of the work till October 2006. Instead, injudicious disposal of the wastage steel beyond 7 per cent through auction sale was made at much lesser rate than the recoverable penal rate and resulted in loss of Rs.4.07 crore. The Railway Administration admitted the audit contention (December 2006, January 2007 and March 2007) and could recover only Rs.0.92 crore towards allowable wastage (upto 7 per cent) through adjustment in the final bill leaving a balance of Rs.1.85 crore unrealised till date.

Thus, failure of the Railway Administration to observe the contractual provision had resulted in loss of Rs.5.92 crore towards non-realisation of cost of steel wastages from M/s. BBJ.

4.2.4 Metro Railway: Poor Material Management

Improper material management of Railway led to avoidable expenditure of Rs.1.11 crore on unnecessary procurement of stores and continued blocking up of capital of Rs.2.03 crore
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Rules provide that stock should be such that stores required by the railway are readily available when required, however, the stock of stores should be as

small as possible so that losses on account of obsolescence or deterioration can be minimums.

Review of records of Controller of Stores (COS)/Metro Railway, however, revealed that Ballast Less Track (BLT) stores worth Rs.2.03 crore were lying at Patipukur Stores Depot for more than 15 years. Despite COS's continuous requests for liquidation of the existing stock Chief Engineer, Metro Railway met his requirement of BLT materials during the period January 2002 to March 2006 through works contracts. A review of works requiring BLT material executed during above period revealed that BLT items valuing Rs.1.11 crore were procured for track renewal works resulting in avoidable expenditure and making the existing stock of Rs.2.03 crore as dead surplus.

When the matter was brought to the notice of Railway Board in August 2007, they stated (October 2007) that BLT materials have now become mostly obsolete due to change in technology and Dy. Chief Material Manager may not have been aware of this technical aspect. They further added that there is no correlation with materials lying in the stores and material procured through works contract.

The reply is not acceptable. The remarks of Metro Railway itself disclose the difference of opinion between Engineering and Stores Department. Besides, the confirmation (June 2007) of Dy. Chief Material Manager that the materials lying (both stock and non-stock) are for BLT, Railway failed to explore the possibility of utilising the lying BLT materials before going for procurement of the same through works contracts, which led to obsolescence/deterioration of the materials.

Thus, improper material management of Railway led to avoidable expenditure of Rs.1.11 crore on unnecessary procurement of stores and continued blocking up of capital of Rs.2.03 crore.

4.2.5 Chittaranjan Locomotive Works: Rejection of material due to failure to give proper specification

Failure of CLW to indicate the correct specification of the Mild Steel Plates at the time of placement of indent to the Railway Board led to supply of deficient materials and consequently loss of Rs.0.73 crore on account of cost of rejected material and other charges incurred thereon

CLW procured Mild Steel (MS) Plates for manufacture of various components of locomotives from Ms/ SAIL through the Purchase Contract entered into by Railway Board (July 2005 and June 2006). MS Plates of 80 mm were procured for manufacture of Equalizer and compensating Beam for WAG-7 locos. MS Plates of 56 mm were procured for rolling of Barrels of Hitachi Traction Motor.

During utilisation of the steel items, the thickness of both types of MS plates was found to be inappropriate and not as per requirement. High hardness and unfavourable microstructure also contributed to the material developing cracks during rolling. When CLW complained (June 2006) about inappropriateness of the material, M/s SAIL did not entertain the complaint on the ground that they had supplied the material as per order placed by the Railway Board and

there was no mention in the technical specification regarding internal soundness to be tested ultrasonically.

Subsequently, in a joint inspection of the material conducted (November 2006) by CLW and M/s SAIL, it was decided that thickness of the materials as well as ultrasonic testing to detect internal flaw be incorporated in the Technical Conditions at the time of placement of orders.

Thus, the failure of CLW to indicate the correct specification and appropriate conditions regarding detection of flaw in the steel materials at the time of placing of indents to the Railway Board led to incurrence of wasteful expenditure of Rs.0.73 crore on account of cost of rejected material and other charges on processing of the components during February 2005 to February 2007.

When the matter was brought to the notice of Railway Administration in March 2007, they stated (August 2007) that there was no deficiency in the specification as these were generally drawn in consultation with SAIL who were the only supplier of the item when introduced for manufacturing in CLW. Material of same specification supplied by the firm up to 2004 was quite satisfactory. However, subsequently change in process by SAIL had resulted in increased rejection.

The reply is not acceptable because while drawing the specification, CLW did not enquire about the change in the process in manufacturing of the item supplied by SAIL. As the rejections of the materials were increasing, CLW should have started quality testing of the material before it was issued to shops.

The matter was brought to the notice of Railway Board in September 2007; their reply has not been received (December 2007).

4.2.6 South Eastern Railway: Loss due to non-return of Cast Iron Rollers

Railway Administration suffered a loss of Rs.0.67 crore due to non-return of Cast Iron Rollers besides consequential avoidable financial liability of Rs.0.70 crore for their recoupment.

Cast Iron (CI) rollers are used to facilitate unloading of long panel rails which are placed on these rollers at the time of loading in flat wagon. Flash Butt Welding Plant (FBWP) Jharsuguda (JSG) dispatches panel rails mainly to Open Line and Construction Organisations of home as well as other Zonal Railways for track renewal works and laying of new lines.

The rollers required for unloading of the panel rails at destination are loaded in a covered BCXR wagon and alongwith CI rollers handed over to the representative of the consignee at the time of loading the rails. After unloading the panels at the destination the empty flat rakes along with the covered BCXR wagons loaded with CI rollers and unloading equipment are returned to FBWP. Shortages in the rollers and other unloading equipment sent and received back are adjusted by raising debits against the consignee.

Scrutiny of records of FBWP/JSG revealed that proper records of receipt and issue of CI Rollers were not maintained. A review of Adjustment Memos prepared to adjust the cost of missing CI Rollers revealed that during 2000-01 to 2006-07 12644 CI costing Rs.0.67 crore Rollers were not returned to the original supplier. As a result Railway had to incur avoidable financial liability of Rs.0.70 crore (12644 x Rs.557) by way of recoupment of deficient rollers to execute the operation of loading and unloading of panel rails.

When the matter of non-return of CI roller was brought to the notice FBWP authorities, they stated (December 2006) that the cost of missing roller would be recovered in due course.

The reply was found not convincing. In fact Railway has not devised a fool proof method for monitoring the receipt and issue of CI Rollers. Moreover, the debits are being accepted without conducting investigation for the missing rollers or fixing responsibility of the staff handling the material.

Thus, failure of Railway Administration to provide systemic monitoring of the movement of CI rollers led to a loss of Rs.0.67 crore due to non-return of 12644 CI rollers besides consequential avoidable financial liability of Rs.0.70 crore for their recoupment.

The matter was brought to the notice of Railway Board in October 2007; their reply has not been received (December 2007).

4.3 Blocking up of capital/ avoidable expenditure

4.3.1 Diesel Locomotive Works: Infructuous expenditure on procurement of Portal Milling Machine

Failure of DLW to prove out the Portal Milling Machine within stipulated time not only led to blocking up of fund of Rs.21.00 crore invested for procurement of machine but also resulted in incurrence of extra expenditure of Rs.89.80 crore

In order to achieve self sufficiency in the production of high capacity diesel locomotives, Indian Railways entered into an agreement for transfer of technology (TOT) for manufacture of 710 series of high Horse Power, State of Art Microprocessor Controlled fuel efficient WDG 4/WDP 4 diesel locomotives at Diesel Locomotive Works (DLW), Varanasi. As a part of the project of TOT Phase II, DLW decided to import one Portal Milling Machine for fabrication of Crank Cases and Oil Pans for use in WDG 4/WDP 4 locomotives.

DLW placed an order (March 2003) on a German firm for procurement of portal milling machine at a cost of Rs.25.84 crore. The objective of procuring the machine was to ensure steady supply of finished Crank Cases and other related items as well as to bring down the cost of these items through in-house production. The cost of machined fabricated Crank Cases produced in-house is assessed at Rs.0.39 crore.

The machine was received at DLW in September 2004 and installed/commissioned in June 2005. As per the Modification Advice, proving out of the machine was to be completed by the firm within six weeks from the date of commissioning. Audit observed that though a period of two years has lapsed but the proving out was yet to be completed (June 2007). It was further noticed that due to delay in proving out of the machine, DLW imported 116 finished Crank Cases at a cost of Rs.1.16 crore each during July 2005 to March 2007 resulting in extra expenditure of Rs.89.32 crore i.e. difference in cost of import and cost of in-house production (Rs.1.16 crore minus Rs.0.39 crore).

Thus, procurement of a machine costing Rs.25.84 crore without conducting proper testing to assess its suitability and proficiency besides idling of investment has resulted in extra expenditure of Rs.89.32 crore.

When the matter was brought to the notice of Railway Board in October 2007, they stated (November 2007) that import of GM Crank Cases had to be resorted to in order to turn out GM Locomotives as per targets/ production plan approved by the Railway Board and except Serration Milling operation, other production activities have been carried out on the machine since April 2007. Moreover, in view the high cost of testing at firm's premises and the problems associated with dispatch of fabricated crank cases for machining to Germany, it was decided to prove out through NAS Test.

The contention is not acceptable as the machine has not been proved so far (September 2007) and in view of its poor performance, production in near future is a remote possibility. Further, DLW has ordered/ purchased 77 finished Crank Cases by incurring further expenditure of Rs.2.20 crore to meet the production target because of non-functioning of this portal machine. Moreover, the difference between the original and revised cost of testing the machine at firm's premises was Rs.0.09 crore only. In view of the high value of machine, the decision taken by the TC accepting the NAS test was not judicious.

4.3.2 Diesel Locomotive: Failure in implementation of machining Works of Connecting Rods

Failure of DLW to procure some vital allied plant and machinery for implementation of machining of Connecting Rods for upgrading the technology of production of diesel locos led to blockage of fund invested (Rs.5.74 crore) as well as to constant dependence on import of various components at higher cost

In order to upgrade the technologies as well as facilitating indigenous production of components for the WDG4/WDP4 locomotives DLW decided to undertake in-house production of Connecting Rods and entered into an agreement for supply of Machines and Transfer of Technology (TOT) with M/s General Motors, USA. A review of Plant and Machinery procured by DLW revealed the following:

- (i) In case of CNC Horizontal Machining, the firm could not supply the machine as per the contractual specification. Firm had requested for various amendments, which are under examination by TC members.
- (ii) Insurance claim against damage to Creep Feed Grinding Machine has been regularly followed. Partial claim forwarded by Insurance Co. of Rs.1.61 crore has not been accepted and Insurance Co. has been asked to settle the full amount of the claim. In case of Internal Grinder, LC has been opened on 17 August 2007 and the machine is to be supplied by the firm within six months.

The reply is not acceptable because

- (i) CNC Horizontal Machining could not be procured resulting in failure of 'Connecting Rod' project as DLW failed to finalise the specification even after a period of two years,.
- (ii) The contention of the audit that Rs.3.66 crore on Creep Feed Grinding Machine remains blocked holds good even now as DLW has failed to realise the claim till date.
- (iii) In case of Internal Grinder, had the LC been opened earlier, the machine could received in due time as anticipated and the loss already borne on this machine could have been avoided.

4.3.3 Diesel Modernisation: Avoidable expenditure on in-house conversion of Magnet Frames Works

In-house conversion of 165M Type Magnet Frames into 4907 AZ Type Magnet Frames instead of outsourcing the work resulted in avoidable expenditure of Rs.3.04 crore

Diesel Loco Modernisation Works (DMW)/Patiala a Production Unit of Indian Railways, started (January 2000) upgrading Diesel Electric locomotives of 2600 HP to 3100 HP during their re-habilitation. In the process the Magnet Frames of 165-M, 165 and 752 type fitted on the locomotives were required to be replaced by 4907-AZ type Magnet Frames.

DMW, procured initially new 4907-AZ type Magnet Frames from M/s BHEL/Bhopal at the cost of Rs.1.37 lakh each. DMW also started (March 2001) in-house conversion of old/surplus 165-M type Magnet Frames into 4907 AZ type Magnet Frames at the cost of Rs.56881. Further due to machinery constraints, 135 numbers of 165-M type Magnet Frames were got converted by outsourcing the work during 2003-04 at the rate of Rs.36,478 each against the in-house conversion cost of Rs.51,867.

DMW continued the process of conversion in-house despite knowing the fact that the in-house conversion cost was abnormally higher and two successful and capable outside sources had been developed. Thus, in-house conversion of 1014 Number of frames into 4907 AZ type frames (2003-07) resulted in avoidable extra expenditure of Rs.3.04 crore.

The matter was taken up by Audit (December 2006) with Railway Administration who stated (August 2007) that the prime responsibility of DMW/Patiala was to ensure the timely supply of 4907 type Magnet Frames for assembly of traction motors which are required for assembly of re-manufactured locomotives to be supplied to Zonal Railways and as conversion of magnet frames was a core and critical activity, it was not considered prudent to completely off load conversion of magnet frames to trade.

Railway's contention is not acceptable because the Railway Board had directed (October 2003) that DMW should stop procuring Magnet Frames from BHEL and the requirements of modified frames may be met either from in-house conversion or through out sourcing. However, DMW continued with in-house conversion of Magnet Frames at a higher cost than the outsourced conversion cost leading to avoidable expenditure of Rs.3.04 crore.

The matter was brought to the notice of Railway Board in October 2007 who stated (November 2007) that shortfall of magnet frames is met by outsourcing and loss pointed out by audit is notional as minutes of meeting had not set any cut off date for stopping the procurement of new magnet frames from M/s BHEL. Railway Board's contention is not acceptable in view of the fact that outsourcing was cheaper and DMW had already developed two sources for outsourcing his work. Railway Administration's should have considered outsourcing keeping the overall interest of Railways.

**4.3.4 South Western: Loss due to unwarranted modification/
Railway deletion of a clause of specification**

Unwarranted deletion of a paragraph of a clause during the modification of a specification resulted in loss of Rs.1.64 crore
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Rail Wheel Factory (RWF), Yelahanka produces trailing axles of carriage, wagons and Electrical Multiple Units (EMU) by using steel blooms corresponding to Indian Railway Specification (IRS) R-16 and driving axles of Locomotives by using steel blooms to the IRS R-43. Steel blooms are procured from different Steel Plants.

Specifications in respect of both types of blooms contained *inter alia* two distinct paragraphs under clause 21.8 regarding rejection of blooms till October 2002. First paragraph stipulated that if any bloom/axle was rejected during the course of inspection/processing/ testing at the premises of the RWF on the basis of Ultrasonic Testing (UT)/Magnetic Particle Testing (MPT), the bloom giving rise to the defective axle was to be rejected and the supplier had to replace an equivalent input of sound bloom without any additional charge. However, as per the second paragraph, if rejection of axles per heat/cast at MPT exceeded five per cent per heat or exceeded one per cent of total axles processed in a month, the processing cost of such axles exceeding 5 per cent per heat or one per cent of overall processed quantity in a month, whichever was higher, was to be recovered from the supplier. Accordingly, whenever axles were rejected at UT/MPT, the suppliers were asked to replenish the equivalent weight of sound bloom at no extra cost and the same was being complied with.

RWF submitted (November 2002) a proposal to amend IRS R-16 wherein along with other aspects deletion of the second paragraph of clause 21.8 was recommended in view of the difficulties in its implementation. It was also anticipated that deletion of this clause would result in lower rates. But, in the amended version of the Specification, entire clause 21.8 was deleted and replaced by a new modified clause. According to this modified clause, if any bloom was found to be defective during the course of inspection at the premises of RWF prior to processing, the bloom was to be rejected. Thus, amended Specification was to deal with the rejection of blooms prior to processing only and in the Specification, there was no clause to deal with the rejection during processing and testing. IRS R-43 was also amended in the same manner.

Due to CME's approval to an unwarranted deletion of a paragraph of the clause regarding Specification, Railway had to compromise their interest with regard to the cost of axles rejected during processing. When pointed out (February 2005) by Audit, RWF Administration reintroduced (October/November 2005) the relevant paragraph in both the specifications thereby acknowledging the lapse.

Railway suffered a net loss of Rs.1.64 crore during the years 2003-04 to 2006-07 on account of rejection of blooms which were neither replaced by the Steel plants nor converted into good axles by RWF. Since orders for the procurement of blooms for the years 2006-07 and 2007-08 were issued without the amended Specification, loss due to unwarranted deletion of clause would continue. In the absence of proper records for this period, process loss was not assessable.

On this being taken up in Audit (January 2007), Railway stated (May 2007) that there was no significant loss as the defective axles were converted into good axles. Railways reply is not acceptable as complete details for converted and ultimately rejected axles were not available with Railway and therefore, loss can not be accepted as negligible.

The matter was brought to the notice of Railway Board in September 2007; their reply has not been received (December 2007).

4.3.5 Central Railway: *Avoidable expenditure in manufacture of Self Printing Ticketing Machines*

The failure of the Railway Administration to adjudge the future demand for SPTMs properly due to introduction of UTS resulted in infructuous expenditure of Rs.1.28 crore

The project for provision of Unreserved Ticketing System (UTS) in all Zonal Railways was sanctioned by Railway Board in the year 2003-04. Prior to introduction of UTS, Central Railway was using Self Printing Ticketing Machines (SPTM) for issue of tickets to suburban passengers.

Railway placed six Job Orders for manufacturing 41 SPTM for installation at various suburban stations of Mumbai Division between March 2004 and November 2005. Though the Byculla Workshop had manufactured 40 SPTMs by December 2006, delivery of only 15 SPTMs was taken and the remaining 25 SPTMs are lying in the stores of the Workshop. Out of the 15 SPTMs

delivered for installation, only 11 have been installed between July 2004 and August 2007 and four are lying unused. Thus out of the total of 40 SPTMs, 29 machines of the value of Rs.1.10 crore have been idling in the stores. It was also observed that material worth Rs.0.18 crore sufficient to manufacture seven machines including cost of one semi finished machine was also lying in the Workshop. As the Railways have already taken up the work of provision of UTS and large number of usable SPTMs have been spared, the chances of using these machines elsewhere are also very remote and the entire expenditure of Rs.1.28 crore incurred in manufacture of 29 machines and procurement material lying in the Workshop is likely to be rendered infructuous.

The failure of the Railway Administration to adjudge the future demand for SPTMs properly has resulted in infructuous expenditure of Rs.1.28 crore.

The matter was brought to the notice of the Railway Administration and Railway Board in August 2007 and September 2007 respectively. Railway Administration in their reply (October 2007) stated that four machines are likely to be commissioned by 31 March 2008 and six have been transferred to Southern Railway. The remaining machines are also likely to be transferred to them against their demand of manufacture of 200 SPTMs. The reply is not acceptable because Railway Board has refused permission to Southern Railway for manufacture of standalone ticketing machines. Moreover, in view of the UTS the use of SPTMs will stop and even the machines installed earlier and removed from the locations after provision of UTS have become spare. Reply from Railway Board has not been received so far (December 2007).

4.3.6 Central Railway: Loss due to premature failure of CMS obtuse crossings

The failure of Railway Administration to ensure the reliability of CMS obtuse crossings by conducting field trials before going in for large scale procurement has resulted in wasteful expenditure of Rs.0.89 crore besides running the trains in unsafe conditions

Keeping in view the poor maintainability of diamond layout laid on wooden sleepers with built up obtuse crossings, Central Railway placed in March 2000 a purchase order on M/S Bhilai Engineering Corporation Ltd. for manufacture and supply of 206 Nos. of 1 in 8.5 CMS obtuse crossings for diamond & slips B.G. (1673mm) for 52kg on PSC sleeper conforming to Drawing No. RDSO/T-5265/1. As per conditions of contract, the production in bulk was to be undertaken only after the approval of prototype by RDSO. Ten prototypes of 1 in 8.5 CMS obtuse crossings were approved by RDSO in November 2000 and the firm was permitted to continue regular manufacture of the remaining quantity. Since obtuse crossing was a safety related item, instructions were reiterated to the firm to pay close attention at every stage of manufacture. Subsequently the quantity of CMS obtuse crossings to be supplied to Central Railway was revised to 241 Nos.

Audit scrutiny of records of Engineering Department of Central Railway revealed that the firm had supplied the obtuse crossings from November 2001 to August 2002. Central Railway had commenced laying of these obtuse

crossings on 28 April 2002 and barely one month after laying, cracks propagating from flange to web were noticed. The firm was asked on 5 June 2002 to depute their engineer for investigating the reasons for cracks so that remedial action could be initiated. The firm, however, took around six months and after investigation in December 2002 reported that cracks were found at locations where thickness suddenly decreases and the portion of obtuse crossing remains hanging between two sleepers. As this portion was heavily stressed and subjected to tremendous unidirectional bending stress at the time of passing of train, the failure was due to fatigue stress and the design of crossings needs review. In view of firm's report, Central Railway asked RDSO in December 2002 to review the design of crossing. RDSO deputed its team for inspection of cracked crossings in February 2003 and advised to stop further procurement till the investigation was completed. In April 2004, RDSO advised Central Railway to use crossings which were manufactured with improved specification i.e. having grain size finer than 4. It was also stipulated that obtuse crossings should be laid with adequate ballast cushion, complete fittings and proper grooved rubber sole plates.

It was, however, noticed by Audit that CMS obtuse crossings laid at almost all the locations had developed cracks and the position had not improved even though crossings had been replaced two to four times within a span of four to five years. Frequent replacements of the crossings procured from M/S Bhilai Engineering Corporation Ltd. revealed that as against the prescribed life of 60 months, 83 crossings were replaced within 2 to 17 months, 10 were replaced within 19 to 37 months and there were only two obtuse crossings which could sustain for the period of 41 and 46 months. This has resulted in unproductive expenditure of 0.89 crore on account of proportionate cost based on the prescribed life plus laying and removal charges. Despite the fact that obtuse crossing is a safety item, RDSO has not yet changed the design and Central Railway is using the same stock as replacement.

When the matter was taken up with Railway Administration in April 2007 they stated in June 2007 that detection of exact cause of failure is a time consuming job and this could be the reason for RDSO taking long time for final decision. It also stated that procurement can not be termed as wasteful as the CMS crossings had improved the riding quantity, provided good track stability and had practically no maintenance. The reply is not acceptable because a period of almost five years have elapsed since the matter of crack in CMS obtuse crossings procured from M/S Bhilai Engineering Corporation Ltd. were reported to RDSO. However, despite clear recommendation by the supplier regarding change in design, RDSO has so far not traced the exact cause of failure. This has resulted in running of trains in unsafe conditions. The Railways contention that use of these crossings has reduced the maintenance cost to nil is not factually correct. In fact most of these crossing were replaced within a short life span of 2 to 17 months resulting in wasteful expenditure.

Thus, the failure of Railway Administration to ensure the reliability of CMS obtuse crossings by conducting field trials before going in for large scale

procurement has resulted in wasteful expenditure of Rs.0.89 crore besides running the trains in unsafe conditions.

The matter was brought to the notice of Railway Board in September 2007; their reply has not been received (December 2007).

4.3.7 North Central Railway: *Infructuous expenditure on reconditioning the machines*

Railways decision to get the machines reconditioned resulted in infructuous expenditure of Rs.0.82 crore
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Rail Spring Karkhana (RSK) at Sithouli near Gwalior had one preload testing machine and two sophisticated hydraulic, pneumatic and electronic controlled machines (UTS) since its inception in 1989 for load testing of the springs. UTS machines were being mainly used to test the springs in terms of its load carrying capacity in different lots. Both the UTS machines went out of order in the years 1992 and 1996 respectively. Railway's efforts (November 1999) to get one UTS machine repaired did not materialize. Since, the procurement of new UTS machine was not considered viable, the Railway Administration decided (September 2000) to recondition these two UTS machines.

Railway awarded (November 2002) a contract for the reconditioning of two UTS machines at a cost of Rs.0.94 crore (including Rs.0.12 crore for AMC) to be completed within five months from the date of handing over of machines.

Machines were handed over to contractor on 25 January 2003 (UTS-II) and 18 December 2003 (UTS-I) and were commissioned on 4 March 2004 and 17 April 2004 respectively. However, after reconditioning, the machines could not be put to load testing and remained under break down. Warranty period was extended up to August and June 2006 for UTS-I and II, respectively. Immediately after the expiry of warranty period, both the machines started giving trouble again. Failure notices were issued for UTS-I and UTS-II during October 2006 to February 2007 and in February 2007 respectively. A sum of Rs.0.82 crore was paid to the contractor up to May 2006.

A review of records in Audit has revealed that after reconditioning of these machines 23628 Rail Springs (10.17 per cent of the total production of the period) only were tested during April 2004 to November 2006. The decision of the Railway Administration for getting the UTS machines reconditioned was imprudent.

During the period 1996-2004, as UTS-I & II were not working the work of load testing of springs remained unaffected. This indicates that the reconditioning of these machines was not required and the expenditure of Rs.0.82 crore incurred by Railway was infructuous.

The matter was brought to the notice of the Railway Administration and Railway Board in April 2007 and October 2007 respectively; their reply has not been received (December 2007).

4.3.8 Central Railway: Unproductive expenditure in procuring Utility Vehicle

The failure of the Railway Administration to get the Utility Vehicle commissioned successfully besides unproductive expenditure of Rs.0.81 crore, resulted in avoidable expenditure of Rs.0.64 crore on outsourcing the works

In order to facilitate picking up of the released materials like rails, sleepers etc. from the site of works, Railway Board placed (June 2002) a Developmental Order on M/S Bharat Heavy Electricals Ltd. (BHEL) for manufacture and supply of one Utility Vehicle at a total cost of Rs.0.81 crore. The Utility Vehicle after satisfactory inspection by the purchaser or his authorised nominee, was to be consigned to Central Railway. In March 2003 Central Railway allotted this vehicle to Nagpur Division.

Audit scrutiny of the records of Nagpur Division revealed that delivery of the Utility Vehicle was taken by PWI/STM on paper on 20 June 2003. However, the vehicle was retained in the custody of BHEL till speed certificate for its movement was obtained. The speed certificate was issued by RDSO in November 2003 and the vehicle was brought to Junardeo station of Nagpur Division in January 2004. Though M/S BHEL had advised to carry the vehicle as dead load, the Central Railway Administration drove it. In April 2004 Railway asked BHEL to depute their engineer for training of the personnel and commissioning of the vehicle. The representative of BHEL inspected (May 2005) the vehicle at Junardeo and intimated that the commissioning of vehicle could not be undertaken because its batteries were completely discharged. It was also observed by him that since the vehicle had already been run on its power from Jhansi to Junardeo, the commissioning at site was a mere formality. It was also seen in Audit that the commissioning of the vehicle was delayed mainly for want of clearance by Commissioner of Railway Safety and Railway Board which was given in December 2004 and June 2005 respectively. Though the vehicle was formally commissioned in July 2005 after replacement of batteries and some repair to its engine it failed several times and could not be commissioned successfully as the representatives of supplier could not rectify the defect to make the vehicle workable. The vehicle could not be put to any use till date (September 2007).

When the matter was taken up with Railway Administration in April 2007 they admitted (August 2007) that the vehicle has not been functioning as the supplier could not repair it for successful commissioning.

The failure of the Railway Administration to get the Utility Vehicle commissioned successfully for more than four years besides unproductive expenditure of Rs.0.81 crore has resulted in avoidable expenditure of Rs.0.64 crore on outsourcing the work.

The matter was brought to the notice of Railway Board in October 2007; their reply has not been received (December 2007).