

Chapter 1
Freight and Wagon Management on Indian Railways

1.1 Highlights

- Railways have permitted the running of trains loaded with enhanced quantity without complying with the conditions laid down for protecting track and rolling stock. Even after permitting loading of wagons with enhanced quantity, the trend of overloading continued. Increased incidence of rail fractures, weld fractures and defects in wagons and locomotives was seen.

(Para 1.8.1)

- While rationalising the freight structure, the rates for eleven commodities were reduced by three to 54 per cent. Further, in respect of transportation of three of these commodities Edible Oils, Motor cars and Tea the decrease in rates resulted in even the haulage cost not being recovered.

(Para 1.8.2)

- Non-provision of wagon load class for commodities placed in highest class has abolished the provision of charging higher freight in case of non-compliance with conditions laid down for availing the benefit of concessional train load rates. While the parties get the benefit of concessional rates even without compliance of all conditions, Railway has lost the operational benefits gained through bulk movement.

(Para 1.8.3)

- Lowering of class of Petroleum products has not resulted in achieving the intended benefit of increasing the Railway's share of traffic. Instead earnings have decreased by 15 per cent in the year 2003-04 and 2.62 per cent in year 2004-05.

(Para 1.8.4)

- The decision of the Railway to allow CONCOR to carry CC commodities in containers and recover haulage rates instead of Railway tariff rates has resulted in decrease in revenue of 43 to 73 per cent per wagon. In one year alone, Railway lost revenue of Rs.28.37 crore.

(Para 1.9.1)

- Non-charging of freight for traffic carried by CONCOR, on the basis of the carrying capacity of the wagon has resulted in freight being recovered for less weight to the extent of 5 to 33 tonne per wagon. Railway has lost revenue of Rs.4.38 crore on this account during 2005-06 alone.

(Para 1.9.2)

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- **Though wagon supply by PSUs was not as per target, orders for sizeable quantities were continued to be placed on them resulting in backlog of supplies and hampering Railway's procurement schedules.**

(Para 1.10.1)

- **Wagons were detained at stations/sidings/exchange points/yards for want of adequate handling capacity. Railways suffered a total loss of earning of Rs.168.48 crore during the six month period from October 2005 to March 2006.**

(Paras 1.10.2.1 and 1.10.2.2)

- **There was underutilisation of BG wagons during transshipment of contents of MG wagons resulting in loss of Rs.5.63 crore.**

(Para 1.10.2.3)

- **Wagons due for periodical overhauling underwent excess detention at various stages- before being sent for POH to the workshops, during POH in excess of the time allowed and after POH before being sent back for operational use. Detention due to these reasons resulted in loss of earning capacity of Rs.65.26 crore.**

(Para 1.10.3)

- **Infrastructural facilities continued to be deficient resulting in detention and levy of demurrage. Further, Railways waived a major portion (56 per cent) of the levied demurrage thereby weakening the deterrent effect of imposition of such charges.**

(Para 1.10.4)

1.2 Gist of recommendations

- Since loading of wagons beyond permitted axle load limits is likely to damage rolling stock as well as track, Railways should take urgent steps to complete the installation of weigh bridges at all the loading points as well as strengthening the monitoring mechanism as envisaged. Since the increase in permissible axle load reduces the leeway available no overloading whatsoever should be permitted as this would have serious impact on track.
- Railway Board may consider introduction of higher wagon load class rates for commodities placed in the highest class to ensure that benefit of train load rates cannot be availed without compliance of the conditions prescribed.
- In line with their original objective CONCOR should concentrate on piece meal traffic and not on bulk commodities. If bulk commodities have to be carried then the charges payable to the Railways should be commensurate with the Railway Tariff rules.
- Railway Board should consider placing orders for wagon production on those firms which are satisfactorily completing the production. Production

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of the wagons by the firms should be monitored on monthly basis and suitable action should be taken for non-adherence of production targets.

- The creation of additional facilities in consultation with the parties involved should become a priority area of action, since the wagons in most of cases are detained for want of adequate facilities for handling.

1.3 Introduction

Indian Railways play a crucial role in the social and economic development of the nation. With a vast network of 63,465 route kilometers, they are the principal mode of transportation for long haul freight movement in bulk. The Railways carried around 600 million tonne of freight during the year 2004-05 comprising 64 per cent of the total revenues earned by the railways. Railway transportation is a derived demand and is directly dependent on the growth of six major infrastructure industries in the country viz. electricity, coal, steel, crude petroleum, petroleum refinery products and cement, to which majority of railway customers belong. Over the years, the railways' share of the total transport share has come down from 53 percent in the IV Five-year plan to 37 per cent in the IX Five-year plan. The report of the working group on Railway programmes for the X Five-year plan lays down detailed freight operational and marketing strategies for achievement of projected freight targets. The achievement of these targets largely depends on the manner in which the Railways reshape their policies and strategies not only to regain the lost share in freight traffic but also to provide value for money to customers in terms of better facilities and improved services.

1.4 Organisational structure

The Traffic Commercial directorate of Railway Board is responsible for the policy formulation on tariff and marketing strategies. The Traffic Transportation directorate monitors the movement of traffic of different commodities. The two directorates function under the overall control of Member Traffic. These directorates interact with trade representatives at regular intervals, identify high profit yielding commodities and monitor the freight business operations at the Ministry's level. At the Zonal Railway level, the freight business operations are looked after by Chief Commercial Manager, Chief Commercial Manager (Freight Marketing), Chief Operations Manager and Chief Freight Transport Manager. At the divisional level, the Sr. Divisional Commercial Manager is responsible for implementation of the policies and programmes.

1.5 Audit objectives

1.5.1 While the rationalisation of the freight structure was oriented towards simplification of the tariff, Audit intended to assess whether all the aspects of freight were considered adequately. The sub objectives would be to assess-

- Whether the conditions laid down to ensure safety of rolling stock and track along with the running of freight trains with enhanced weight were observed.

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- Whether reclassification of commodities earlier charged at minimum weight condition (MWC) was done after conducting thorough analysis of the freight that was earned and freight that would be earned after reclassification.
- Whether the impact of non-provision of separate wagon load class for commodities placed in the highest class was considered before doing so.
- Whether the intended objectives of retaining rail share of traffic in respect of POL items by lowering the highest class were achieved.

1.5.2 Whether railways' tariff policy for carrying goods in CONCOR containers has achieved the intended benefits of capturing the piece meal traffic which the Railways had lost due to its policy of bulk movement.

1.5.3 Whether the procurement of wagons was as per requirement and whether the Railways have provided adequate handling facilities at stations/siding/ yards etc. to ensure optimum wagon utilisation and minimisation of detention on account of inadequate handling facilities.

1.6 Audit scope and methodology

The impact of enhanced loading of wagons on iron ore routes and coal routes was reviewed over Central, Eastern, East Coast, Southern, South Western, South Central and South Eastern Railways. The impact of rationalisation of freight structure was reviewed on all Railways. In respect of CONCOR traffic the position was reviewed on all container depots.

The procurement of wagons was reviewed at the Railway Board and the position in respect of utilisation, maintenance and detention to wagons was reviewed at 18 goods sheds, 30 private and public sidings, 30 exchange yards and 13 workshops engaged in periodical overhauling of the wagons. The period of review was restricted to four years from 2002-03 to 2005-06.

1.7 Acknowledgement

The audit plan including the audit objectives were discussed by Principal Directors of zonal railways in meeting with respective General Managers/Chief Commercial Managers/Financial Advisers and Chief Accounts Officers (FA&CAO) in the entry and exit conferences. The co-operation of the Ministry of Railways as well as zonal railways during the meetings and in the course of Audit is acknowledged. Audit recommendations were discussed by Deputy Comptroller and Auditor General with the Chairman Railway Board and other Board Members (December 2006).

1.8 Rationalisation of freight structure

Over the years certain anomalies had crept into the freight structure due to ad hoc changes in the freight rates and Railways had felt the need for rationalisation. The Railways initiated the rationalisation of the freight structure from 2002-03 with the objective of simplification and to make rail traffic more competitive with other modes of transport and also to bring transparency in tariffs and rules. The main features of rationalisation as announced in various railway budgets are as follows:

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- (i) The goods carried are segregated into groups and freight is charged under classes assigned to each group of commodities. Rates are fixed for each class on the basis of distance carried. Though the freight rates during 2003-04 were not increased the number of classes was reduced to 27 and the highest class was lowered from 300 to 250. In order to make the rail freight rates competitive, the classification of certain selected commodities such as petroleum products, iron and steel, cement, clinker, soda ash etc. was reduced causing an overall reduction in freight rates ranging from 3.7 per cent for cement to 10.7 per cent for petroleum products.
- (ii) All commodities, which did not have a notified trainload class meant for carrying freight in rakes, were assigned a trainload class, one stage lower than the wagonload class meant for carrying goods in individual wagons.
- (iii) In 2005-06 the highest class was further reduced from 250 to 240. The freight classes in 'Fives' were abolished retaining a uniform interval of 'Tens' between the successive classes. Three new special classes namely 90W1, 90W2 and 90W3 were introduced below class 90 for certain selected lightweight commodities. The total number of classes thus stands reduced from 27 to 19.
- (iv) Further, all commodities were clubbed into 80 Groups and a single uniform class for the various commodities in the group was provided.
- (v) The procedure of fixing 'minimum weight condition' (MWC) for light weight commodities which could not be loaded up to full carrying capacity of a wagon was abolished and a decision was taken to charge freight for weight equal to the carrying capacity of a wagon.
- (vi) Commodities were assigned only trainload classes and if booked as wagon loads, the next higher class was to be applied.

Audit reviewed the financial and other impacts of implementation of various steps proposed in the rationalisation of freight structure. Its observations are given in the following paragraphs:

1.8.1 Impact of CC enhancement

The carrying capacity of a wagon is based upon the load that the axles of the wagon can carry. Prior to November 2004, the wagons were allowed to be loaded upto CC+2 tonne where the permissible axle load was taken as 20.32 tonne. From November 2004 onwards, the loading was permitted upto CC+4+2 tonne. In May 2005, as a pilot project, Railway Board permitted running of these wagons loaded up to CC+8+2 tonne on sixteen identified iron ore routes in order to increase throughput. Subsequently, wagons loaded with coal up to CC+6+2 tonne were also allowed to run on nominated coal routes. The extra loading was, however, to be restricted up to a maximum axle load of 22.82 tonne. In all, 31 Iron Ore and 41 Coal routes were covered under the pilot project. Railway Board in March and May 2005 clarified that the enhanced loading may be permitted subject to:

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- Installation of adequate number of Wheel Impact Load Detectors (WILD) on the zonal railways.
- Thorough physical examination of bridges, rehabilitation of distressed bridges, analysis of bridges for expected loading and installation of bridge load monitoring system.
- Instrumentation and evaluation of bridges by specialised agencies for increased longitudinal loads and higher axle loads.
- Ultra Sonic Flaw Detection testing at appropriate frequencies to detect rolling fatigue and also to assess the impact of enhanced loading on track and rolling stock.
- Installation of in motion weigh bridges to have a check on the over loading over and above the permitted enhanced loading.

The impact of enhanced loading on the track, bridges and rolling stock was to be monitored through quarterly progress reports for ensuring corrective action where required. Audit conducted a detailed review of eleven and six selected routes where enhanced loading of iron ore and coal respectively was permitted and noticed that-

- In almost all the Railways, the pilot projects of permitting the wagons loaded up to CC+8+2 tonne and CC+6+2 tonne were commenced even without fulfilling the conditions of installation of in-motion weigh bridges and provision of Wheel Impact Load Detectors. As against the eleven in-motion weigh bridges to be installed on East Coast Railway, only one was installed so far (September 2006) despite notification of eight routes on this Railway. Similarly, on South Central Railway only five out of nine weighbridges were installed. The position of provision of Wheel Impact Load Detectors was even worse as none was provided on any of the Railways so far (September 2006).
- Even after permitting wagons to be loaded with excess weight up to ten tonne on iron ore routes and eight tonne on coal routes, wagons on South Eastern, South Western, East Coast and Eastern Railways were found to be overloaded beyond these enhanced limits. The overloading beyond the enhanced limits was to the extent of one tonne to 5.70 tonne on an average. This has resulted in loading of wagons to the extent of 24.49 tonne per axle as against the permitted axle load of 22.82 tonne thereby exceeding the axle load limits by one tonne to 1.68 tonne per axle. Exceeding the axle load beyond permitted weight limits would lead not only to axle damages but also serious implications for the safe running of trains due to impact on track and rolling stock. (**Annexure I**)
- The track structures on routes notified over Central and South Eastern Railways were found laid with mixed rails of 90R, 52 KG and 60 KG resulting in imposition of speed restriction of 30 kms per hour. Thus the advantage of extra loading was likely to be nullified by extra time taken in transit.
- There was increase in rail fractures and weld fractures on Central and South Eastern Railways.

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- Glued joint failures, Switch Expansion Joints and Points and Crossing failures were seen on almost all the routes.
- Though South Eastern Railway had identified 223 important and major bridges for monitoring, inspection on 40 such bridges had not been carried out so far (August 2006).
- South Eastern Railway had completed bridge instrumentation for measuring the impact of overloading only on one bridge and tenders for provision of the same on remaining twelve bridges were yet to be finalised.
- Though South Central Railway had identified thirteen bridges as distressed on these routes, rehabilitation of only one bridge was completed and the rehabilitation works on other bridges were in progress.
- The overloading of wagons caused increase in spring failures, Centre Buffer Couplers (CBC) failures and body damages. While the increase of spring failure on South Eastern Railway was 9.65 per cent, the same was 76.84 per cent on South Western Railway. Similarly the increase in CBC failure was to the extent of 11.87 per cent and 16.49 per cent on South Eastern and Southeast Central Railways respectively.
- As reported by Mechanical department, in addition to stalling of trains, failure of certain locomotive components such as Cylinder Heads, Brake Blocks, Dynamic Grid Separator and Element, Power Contactor Tip and CBC Knuckles had also increased.

Thus, though Railway Board has permitted increased loading by as much as six and eight tonne for coal and iron ore respectively, there would be an adverse impact on track, bridges and rolling stock unless the Railways take urgent action to upgrade the track and monitor the parameters closely. The adverse impact would be even more serious in case of overloading beyond permissible limits. Mere levy of penalty would not be adequate as the damage to track and rolling stock could be extremely costly.

Railway Board in their reply (December 2006) stated that CC enhancement was done on Indian Railways as a policy after a paradigm shift in the conceptual perception of design of track structures from deterministic to probabilistic. It was also stated that before allowing CC+ loading, a review of track modulus as well as the rail and bridge stresses were carried out. As regards over loading of wagons even beyond enhanced limits, it was stated that they have initiated installation of over 100 weigh bridges to check the overloading. The reply of the Board is not acceptable because the enhanced loading of wagons was commenced without compliance of conditions laid down. Even one year after the commencement of the increased loading, the weigh bridges at most of the locations are still to be provided and the checks are not in place as evident from the overloading beyond the enhanced limits. This has resulted in overshooting the revised axle tolerance limits.

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Recommendation

Since loading of wagons beyond permitted axle load limits is likely to damage rolling stock as well as track, Railways should take urgent steps to complete the installation of weigh bridges at all the loading points and strengthening the monitoring mechanism as envisaged. Since the increase in permissible axle load reduces the leeway available, no overloading whatsoever should be permitted as this would have serious impact on track.

1.8.2 Incorrect rationale for fixation of lower classes in respect of certain commodities

With effect from 1 April 2005, while rationalizing the freight structure, Railway Board abolished the concept of charging weight on the basis of MWC and introduced a system whereby all commodities were to be charged on the carrying capacity of the wagon used. However, in order to compensate for the increase in freight due to charging for weight not actually loaded in a wagon, the classification of certain commodities was lowered. Audit reviewed the impact of abolition of the concept of charging freight at MWC and found that -

- Although the traders were getting the benefit of carrying higher quantity within a fixed freight by loading the wagons with more quantity than the MWC prescribed earlier, the Railway earnings per wagon were reduced by 54 per cent (turmeric) to three per cent (de-oiled cake) as compared with the freight that was realised at the pre-revised class prior to rationalisation. The over all financial impact of fixing the lower classes in respect of eleven commodities viz. Motor Car, Onion, De-oiled cake, Edible Oil, Timber, Paper, Tea, Milk Powder, Dry chillies, Turmeric and Cotton (full pressed) works out to a loss of Rs.21.93 crore in the year 2005-06 alone.

(Annexure II)

- It was also observed that the freight rates charged in respect of Edible oils, Motor Cars and Tea at class 90 W2 did not even cover the cost of operations (haulage cost) and Railways were incurring losses ranging from 13 per cent for a distance of 500 kms to 24 percent for a distance of 2000 kms. The impact of fixation of lower class at higher distances was much more.

(Annexure II)

Railway Board in their reply (December 2006) stated that the rates adopted by audit for the purpose of calculation were not accurate. This reply is not acceptable since the rates have been calculated on the basis of the Goods Tariff as applicable from 1 April 2005. Moreover, the objection is to the policy changes which have resulted in a loss of revenue. In some cases even the cost of operations have not been recovered as brought out above.

Recommendation

Railways being a commercial organisation, should fix the freight rates in such a manner that at least the cost of operations is recovered.

1.8.3 Non-provision of separate wagon load class for commodities placed at class 240

With a view to achieving savings in operational costs, the Railway Board had introduced (January 1982) lower class for movement of traffic in train loads instead of piece meal wagon loads. Prior to 1 April 2005, all commodities were assigned separate classes when booked as train loads and wagon loads. However, with effect from 1 April 2005 commodities were assigned only train load class with the stipulation that when such commodities were to be booked as wagon loads the freight would be charged at the next higher class. There was no distinction of wagonload and trainload class however, for commodities placed in the highest class such as POL products. The conditions for availing the benefit of train load rates stipulate that the consignors have to indent and load a minimum number of wagons for a particular destination or a combination of two destinations. It also stipulates that benefit of train load rates would be applicable only if the consignor loaded all the wagons supplied.

Moreover, the traffic has to be booked from and to a station notified for handling full rake loads. Where these conditions are not complied with, the freight for all wagons in a rake has to be charged at wagon load rates. These conditions were framed with a view to encourage the consignors to offer train load traffic only at those stations which have adequate facilities so that Railway's marshalling costs could be curtailed and also to encourage the traders to load all the wagons to avoid empty movement.

Audit reviewed the impact of non-provision of a separate wagon load class for commodities placed in the highest class and found that -

- Taking advantage of the fact that they would not be required to pay higher freight in case of non-compliance of conditions laid down for availing the benefit of train load class rates, the consignors were not loading all the wagons supplied to them. As a result of this anomaly in the rules freight in respect of rakes comprising 30,666 wagons where all the wagons were not loaded was charged at train load rates on eight zonal railways as no separate wagonload class was available.
- Similarly, when the commodities placed in the highest class were booked from stations/sidings not notified for handling rake load traffic, the Railways were forced to charge only train load rates as wagon load class rates were not prescribed. The number of wagons loaded with commodities placed in highest class by seven stations alone during 2005-06 was 22,148.
- Other commodities in similar circumstances earned higher freight of approximately five per cent. Using this as a guidelines, the Railways have lost revenue of Rs.4 crore by not providing a separate wagonload class.

(Annexure III and IV)

Recommendation

Railway Board may consider introduction of higher wagon load class rates for commodities placed in the highest class to ensure that benefit of train load rates cannot be availed without compliance with the conditions prescribed.

1.8.4 Impact of lowering the highest Class to 250 and 240

In order to make transportation by rail more attractive as compared with other modes of transport, the classification of certain Petroleum products was lowered from class 280 to class 250 from 1 April 2003 and further to class 240 from 1 April 2005 resulting in an approximate reduction in freight rates by 10.7 per cent and four per cent respectively. The main objective of doing so was to avoid diversion of this traffic from rail to other modes of transport. An analysis of the total traffic moved by rail from 2002-03 to 2004-05 revealed that-

- Even after reducing the rates considerably, the Railway share of POL traffic reduced year after year while the share of other modes of transport particularly road kept increasing. In fact, the Railway's share of total POL traffic has come down from the level of 31 per cent in 2002-03 to 25 per cent in 2005-06 while the road share has increased from 14 per cent in 2002-03 to 23 per cent in 2005-06. This indicates that Railways were not able to retain their share of traffic even after lowering the rates.

(Annexure V)

- Correspondingly, the quantum of Petroleum products traffic moved by rail decreased by 14.08 and 6.03 per cent during 2003-04 and 2004-05 respectively as compared to the traffic carried in 2002-03. The consequent decrease in earnings was to the extent of 15.21 and 2.62 per cent respectively. Overall earnings during 2003-04 and 2004-05 thus decreased by Rs.419.10 crore and Rs.72.06 crore respectively as compared with the earnings of 2002-03 i.e. the year immediately preceding the year in which the reduction was effected.

(Annexure VI)

Railway Board stated during discussions (December 2006) that rates were lowered in order to arrest the decreasing trend of POL traffic. However, as brought out above the strategy of lowering of rates has not helped in arresting the trend of decrease in Railway's share.

1.8.5 Concession in freight to North Eastern States

The Freight Structure Committee had recommended (1955-57) grant of concession in freight for transporting commodities by rail to and from North Eastern region for a limited period for speedy development of Assam as after partition, traffic to most of these areas was to be carried by longer routes. Later the Rail Tariff Enquiry Committee also recommended (1977-80) concessions but insisted that the Government should bear the losses incurred by Railways. Railway Board, however, introduced a six per cent concession to traffic to and from stations located in Assam and other North Eastern States booked via Howrah without asking the Ministry of Finance whether the Government was ready to bear the losses. The matter on this account was taken up with the Ministry of Finance in November 1981 but the proposal was turned down stating that Railway should bear the losses on account of concessions, if any, granted. Subsequently from April 1983 concession of six per cent was extended to all traffic booked to and from stations to Assam and

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other North Eastern states. The objective was to enable speedy development of the Northeast. Railway's Freight and Fare Committee in 1993 had also deliberated on the matter of concession and opined that there was no justification in continuing this concession to NE States. However, no action was taken by Railway to withdraw the concession till January 2006 when their proposal of December 2005 for bearing the losses by Central Government was turned down yet again.

Thus, as a result of continuing with the provision of concession of 6 per cent in the freight despite repeated refusals from Ministry of Finance to bear the losses, Railways suffered a loss of Rs.740.40 crore during 1981-82 to 2004-05. The Railways were also not in a position to assess whether this concession had any significant impact on the economy of North Eastern States.

1.9 Indian Railways tariff policy for movement of CONCOR traffic

Container Corporation of India (CONCOR) was set up in 1989 with the sole objective of developing inter-modal transport services and an efficient and reliable infrastructure for the country's foreign trade as well as multi-modal logistics support for domestic trade and industry. CONCOR was also to undertake vital marketing functions as well as research for integrated logistics infrastructure for the country's trade, commerce and industry. This was primarily to serve as a complementary service of the railway especially to capture high rated and piecemeal traffic which had been abandoned by the Railways due to shift in their policy to move only bulk traffic offered in full train loads. Audit reviewed the policies set forth by Railway to allow CONCOR to carry certain commodities in containers and the charges recovered from them and found that -

1.9.1 Impact of allowing CONCOR to load bulk commodities

In 1994, in view of the shortage of covered wagons, Railway Board permitted CONCOR to move all commodities. However, to ensure that Railway should not lose the traffic as well as their share of revenue, in respect of the commodities which were loadable up to full carrying capacity of wagons and were placed in the category where freight charges were recovered on the weight equal to the marked 'carrying capacity' (CC) of the wagon, CONCOR was required to book such commodities at Railway tariff rates and deposit the full freight with the Railway. For the services rendered by them, 18 per cent of the total freight so realised was paid to CONCOR.

However, keeping in view the fact that the number of CC commodities was very high and most of them were not offered even in full wagon loads, Railway Board short listed eleven commodities viz. Cement, Food grains, Iron and steel from steel plants including pig iron, Salt, Iron Ore, Sponge iron, Lime stone and dolomite, Gypsum, POL, Sugar and Coal and allowed CONCOR to load all except the short listed commodities in containers along with other commodities for which mixed category haulage rates were required to be paid to the Railways.

In 1999, the list of CC commodities was reduced to five and commodities i.e. cement, iron ore as well as pig iron, sugar, coal, lime stone and dolomite were

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permitted to be carried by CONCOR by paying mixed category haulage rates to Railways. In other words, commodities which were part of the regular traffic of the Railways and which should have earned freight at regular tariff were permitted to be carried by CONCOR at much lower rates.

Audit reviewed the financial impact of shifting them from CC category haulage rates to mixed category haulage rates and found that most of the CC commodities which were permitted to be carried by CONCOR in containers could have been conveniently carried in open wagons. Permitting CONCOR to carry CC commodities at mixed category haulage rates resulted in loss of revenue ranging from 49 per cent to 73 per cent per wagon.

Thus, the decision of Railway Board has not only resulted in loss of Rs.28.37 crore but also defeated the purpose of setting up of CONCOR as they, instead of capturing piece meal traffic lost by Railways have made inroads into Railways share of bulk traffic.

(Annexures VII and VIII)

1.9.2 Non-compliance of Minimum Weight Condition

As per the prevalent policy of the Railways, CC commodities such as Cement, Iron & Steel booked from steel plant sidings, POL and Grains & Pulses when carried in containers by CONCOR are to be charged according to rules prescribed in the Indian Railway Conference Association Goods tariff. As per provisions of the Goods tariff, the freight for all commodities is to be charged for the carrying capacity or enhanced carrying capacity of the wagons used.

A review the traffic in respect of CC commodities booked by CONCOR in containers loaded on Railway owned as well as CONCOR owned wagons revealed that -

- Though the carrying capacity of the wagons used for carrying the containers was 48 tonnes and 60 tonnes, the Railways have recovered freight for the carrying capacity of the containers instead of carrying capacity of the wagons used. As the carrying capacity of a TEU (twenty feet equivalent unit) was 21.5 tonnes and only two TEUs can be loaded on a flat wagon, the freight recovered was for only 43 tonnes resulting in less recovery to the extent of 5 tonnes when wagons used was of 48 tonnes capacity and 17 tonnes when the wagon used was of 60 tonnes capacity.
- Similarly, the difference in weight on which freight was charged for a FEU (Forty feet equivalent unit) was to the extent of 21 and 33 tonnes when loaded on a wagon with carrying capacities of 48 tonnes and 60 tonnes respectively.
- Thus, due to non-observance of Goods Tariff rules in the case of traffic related to CONCOR, Railways have lost revenue of Rs.4.38 crore during the year 2005-06 alone.

(Annexure IX)

- It was also observed that the carrying capacity of FEU was fixed on a very low side. In fact volume of an FEU was almost double that of a TEU and

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the haulage charges recoverable for an FEU were also twice that of TEU but the carrying capacity of FEU was fixed at 1.3 times that of TEU. Thus fixation of lower CC has resulted in loss of revenue of Rs.0.50 crore during the year 2005-06 when loaded with CC commodities.

(Annexure X)

Recommendation

In line with their original objective CONCOR should concentrate on piece meal traffic and not on bulk commodities. If bulk commodities have to be carried then the charges payable to the Railways should be commensurate with the Railway Tariff rules.

1.10 Wagon management

The Wagon fleet of the Indian Railways plays an important role in the day to day freight operations of the Indian Railways. Its timely maintenance and optimal utilisation is essential for increasing revenue earnings. As on 31 March 2005, Indian Railway had a wagon fleet of around 4.61 lakh four wheeler units comprising covered, open high sided, open low sided and other types of wagons. Audit observed the following deficiencies in wagon procurement, utilisation, maintenance and measures adopted by Railway to curb detentions.

1.10.1 Procurement of wagons

Wagon procurement for the use of Railways is centralised in Railway Board. Wagon acquisition is a need based activity which is dependent upon the traffic needs and availability of the funds after taking into consideration the replacement of wagons due for condemnation etc. Targets for acquisition of wagons for a particular year are fixed on the basis of traffic projections as intimated by Planning/Traffic Transportation directorate of the Railway Board. The process of procurement of wagons is taken care of by the Stores directorate of the Railway Board which functions under the control of Member Mechanical.

The entire procurement of wagons is made through open tenders. There are 12 companies operating in the country for manufacturing wagons. Six companies are in the public sector domain under the Department of Heavy Industries and six companies in the private sector. Besides, three Railway workshops are also manufacturing wagons.

The planning and procurement of wagons is normally done for a five year plan period based on traffic projections and replacement of wagons due for condemnation. Any revision if required is carried out during the mid term appraisal. While the entire procurement is made through open tendering system, Railways have been following a system of distribution of 75 per cent of the quantity against the tender amongst all the established suppliers, 60 percent of which is to PSUs and 40 per cent to private sector units as per the past performance and capacity of the firms. The remaining 25 per cent quantity is considered for ordering on competitive basis.

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The target of acquisition of wagons fixed for the X plan period as indicated in the Plan Document was 65000 Four Wheeled Units. A summarised position of the quantity ordered during 2002-03 to 2005-06 on PSUs and the private sector wagon manufacturing unit is mentioned in the following table:

(In four wheeled units)

| Particulars | Ordered quantity outstanding as on 1.4.2002 | Quantity ordered during 02-03 to 05-06 | Percentage to total quantity ordered | Quantity to be received during 02-03 to 05-06 | Quantity received during 02-03 to 05-06 | Orders pending as on 31.3.06 |
|----------------|---|--|--------------------------------------|---|---|------------------------------|
| <i>1</i> | <i>2</i> | <i>3</i> | <i>4</i> | <i>5</i> | <i>6</i> | <i>7</i> |
| PSUs | 2922.5 | 28122.5 | 41.65 | 31045 | 19717.5 | 11327.5 |
| Private sector | 2060 | 39397.5 | 58.35 | 41457.5 | 41457.5 | 0 |
| Total | 4982.5 | 67520 | | 72502.5 | 61175 | 11327.5 |

Review of the quantity ordered and received during 2002-03 to 2005-06 revealed that -

- Although there was balance of 2922.5 Four Wheeled Units against the previous orders, Railway Board had placed further orders for supply of 28122.5 Four Wheeled Units (42 per cent of the total quantity) on PSUs. As against a total of 31045 Four Wheeled Units, PSUs supplied only 19717.5 Four Wheeled Units (64 per cent). Specific kinds of wagons such as BOBSN, BOSTHS, BRHNEHS, BRNAHS and BBZI have not been supplied at all and there is a hundred per cent default against the supply of these wagons. Thus, the performance of the PSUs was below par as compared to the private sector suppliers.
- It was noticed that although M/S Bharat Wagon Engineering Co. Ltd (a PSU) had supplied only 477.5 four wheeled units (16 per cent) as against the ordered quantity of 2990 four wheeled units, the liquidated damages of Rs.1.17 crore recovered from the defaulting PSU were waived and refunded. Despite erratic supplies and huge arrears in production, the Railway Board froze the previous orders and placed fresh orders on the PSU for manufacture of 1540 four wheeled units in October 2004. Further an unadjusted advance of Rs.4.17 crore was allowed to remain with the firm without levy of interest.
- Despite the extension of such special benefits to the firm the supply against the fresh orders was also erratic as by the due date the firm had supplied only 485 four wheeled units (32 per cent). Thus the undue advantages in the shape of waiver of liquidated damages and carry forward of unadjusted advance have proved futile and were not justified.

Thus, the policy of favouring PSUs has worked against the best interests of the Railways leaving them with a shortage in a critical area of operations.

Recommendations

Railway Board should consider placing orders for wagon production on those firms which are satisfactorily completing the production. Production of the

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wagons by the firms should be monitored on monthly basis and suitable action should be taken for non-adherence of production targets.

1.10.2 Wagon utilisation

In order to maximise the utilisation of the available wagon fleet, it is imperative that wagons on arrival at stations are loaded/unloaded within the minimum time and dispatched to their destinations without unnecessary detention in stations/yards. The reasons for abnormal detentions should be critically reviewed and action taken to create additional facilities for removal of bottlenecks. Scrutiny of various records related to wagon utilisation maintained at stations/sidings/exchange yards etc. revealed the following:

1.10.2.1 Injudicious notification of stations/sidings for handling full rake traffic

The Operating Department of the zonal railway notifies the stations, goods sheds and sidings for dealing with full and half rakes based on operational feasibility and local conditions prevailing on the zonal railways. Railway Board had issued instructions to zonal railways for notifying stations/siding on their Railways which had full rake/half rake handling facilities so that booking of traffic in rake loads was done only from and to such notified stations. These instructions were reiterated in October 2004. The zonal railways were also asked to augment the capacity of sidings to handle full rakes wherever there was adequate traffic justification.

The action taken by zonal railways for implementation of the directions of the Railway Board issued in October 2004 was reviewed.

- A test check of two stations on each zonal railway notified for handling full rake load traffic revealed that 18 goods sheds on Central, Eastern, North Central, North Eastern, South Eastern, East Coast, Western, North Western, South Western, Southern, East Central Railways notified for handling full rakes did not have adequate facilities as a result of which the rakes handled on these stations suffered detention ranging upto 54 hours per rake during the six months period from October 2005 to March 2006. The total detention suffered by 1,46,028 wagons was equal to 96,420 wagon days resulting in loss of earning capacity of Rs.19.62 crore during these six months.

(Annexure XI)

- Similarly, review of records of 27 sidings which had been notified as full rake handling points for booking of outward traffic revealed the sidings were also not actually capable of handling full rake traffic, as a result of which 11,717 rakes placed for loading in these sidings suffered a total detention of 1,64,289 days. There was a consequential loss of earning capacity of Rs.32.99 crore during the six months period from October 2005 to March 2006.

(Annexure XII)

- Similar review of 26 sidings which were notified for handling full rake of inward traffic revealed that out of 15,55,030 wagons placed for unloading 11,22,342 wagons (72 per cent) suffered detention of 3,06,317 days

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resulting in loss of earning capacity of Rs.62.11 crore during October 2005 to March 2006.

(Annexure XIII)

Thus, the notification of goods sheds and sidings for handling full rakes when they did not have adequate capacity and the failure of the zonal railways to create these has resulted in loss to the Railways to the extent of Rs.114.72 crore for a six month period alone.

1.10.2.2 Detention of wagons at exchange point/yards

In order to ensure that available stock of wagons is utilised efficiently, it is imperative that wagons received in station yards for loading and unloading are immediately dispatched to destinations. Though the Railway Board had introduced long back the concept of direct placement and removal of wagons in sidings, a test check at 29 station yards/exchange points of different sidings revealed that out of 13,613 rakes loaded by parties and placed at the exchange points for onward dispatch, 11,704 rakes (86 per cent) were detained on various accounts such as non-availability of power, section clearance, non-availability of crew and delay in train examination etc. These problems could have been overcome easily with better management by the zonal railways particularly the mechanical and operating departments. The total detention on these accounts during the six month period of October 2005 to March 2006, works out to 2,28,294 wagon days resulting in loss of earning capacity of Rs.53.76 crore. On Northern, South Central, North Central, South Western, Central, Eastern, North Western, Northeast Frontier and East Central Railways, one hundred per cent of the rakes underwent detention before being taken for loading.

(Annexure XIV)

1.10.2.3 Under utilisation of wagons at Transshipment Points

When Railway has to carry goods from stations falling on Meter Gauge (MG) to stations falling on Broad Gauge (BG) or vice versa, they have to transship the contents of MG wagons into BG wagons or vice versa. Since the wagons used on different gauges have different carrying capacities, the contents of one type of wagon cannot be adjusted in full into the other type of wagon. In order to make optimal utilisation of available capacity of wagons it is imperative that at the time of transshipment the contents of one type of wagons are transferred and loaded into other type of wagon to its full capacity and all the wagons in the rake are fully utilised. Audit scrutiny of records at four transshipment points over Western, Southern and Northeast Frontier Railways, however, revealed that contents of MG wagons were transshipped into BG wagons in such a manner that each BG wagon was underutilised to the extent of 5 tonne to 23 tonne. As a result, 3,516 BG wagons were under-loaded to the extent of 64,465.3 tonne resulting in loss of earning capacity of Rs.5.63 crore on account of underutilisation of full capacity of the wagons. The loss could have been avoided by loading the BG wagons to their full carrying capacity thereby using a lesser number of BG wagons.

(Annexure XV)

1.10.3 Wagon maintenance

Regular and periodical maintenance/overhauling of wagons is necessary to keep them fit for traffic use. Railways undertake regular maintenance and periodical overhauling in a time bound manner and as per well laid down schedules at wagon sick lines and workshops. As mentioned in the Indian Railway year book (2004-05) there were arrears in periodical overhauling of BG wagons (5.8 per cent) and MG wagons (7.9 per cent). The review of the arrangements for sending the wagons for periodical overhauling, time taken by workshops in overhauling and removal of wagons turned out after overhauling revealed that -

- South Eastern, Western, South Central, North Central, Southern, West Central, North Western and Northeast Frontier Railways had not taken prompt action to send the wagons due for periodical overhauling to Workshops and these were detained at the yards. During the six months period from October 2005 to March 2006 alone 30,344 wagons due for periodical overhauling were stabled in the yards and sent to Workshops after a total delay of 1,34,591 days resulting in loss of earning capacity of Rs.27.39 crore.

(Annexure XVI)

- On receipt of wagons in the Workshops they could not be taken up for POH immediately due to capacity constraints and bunched supply. Though the detention on account of capacity constraints are genuine reasons and cannot be avoided, Railways could have avoided the bunched supply to minimise detentions.
- Further, most of the wagons undertaken for periodical overhauling were not turned out within the prescribed period. The reasons for delays in periodical overhauling were attributed to shortage of material and staff as well as requirement of more days due to heavy corrosion repairs requiring modifications, denting and painting etc. During the six months period from October 2005 to March 2006 alone the Workshops had taken 1,04,671 wagon days over and above the time allowed resulting in loss of earning capacity of Rs.21.30 crore. Despite the fact that there was a shortage of wagons in the Railway system, effective steps were not taken to minimise the time taken in periodical overhauling by ensuring timely supply of requisite material and staff etc.

(Annexure XVI)

- A scrutiny of records also revealed that wagons turned out after POH were not sent for traffic use immediately. During the six months period from October 2005 to March 2006 alone a large number of periodically overhauled wagons were allowed to remain without use for a total of 81,434 days causing loss of earning capacity of Rs.16.57 crore.

(Annexure XVI)

Railway Board stated that the detention to wagons prior to sending them for POH was because they have to wait for wagons to accumulate for forming a rake. It was also stated that excessive time taken in POH was on account of

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requirement of heavy repair in some cases. The reply is not acceptable because wagons due for POH were allowed to remain in yards for abnormally long periods. For instance, in the six month period reviewed, 440 wagons were sent to the Wagon Repair Shop, Guntapalli after delays ranging from 25 to 300 or more days. Similarly, in respect of 56 wagons, the workshop had taken excess time ranging from 25 to 100 days in POH as against the norms laid down by the Railways themselves. Thus, detaining wagons for such long periods is neither economical nor conforming to the instructions in force.

1.10.4 Adequacy of measures prescribed in rules for curbing detentions and their implementation

Avoidance of unnecessary detentions to wagons reduces the interval between two successive loading operations of the wagons, helping the Railways move more goods traffic given the same number of wagons. Demurrage charges are levied on the parties if they fail to load/unload the wagons within the prescribed time. The sole object of levying demurrage charges is to discourage the detention and improve the turn round of wagons. A review in audit to ascertain whether the existing rules were sufficient to curb the tendency of detaining wagons over and above the time allowed for loading/unloading and to see if there was scope for improvement revealed that -

- The Railway Fare and Freight Committee's observation (1993) that demurrage rates should be fixed in a manner so that they fully compensate for the loss suffered by Railway on account of detention. A review of the rates fixed from time to time during the last three years revealed that they were by and large far less than the earning capacity of the wagons. The rates exceeded the earning capacity only for about a ten month period from February 2005 to December 2005 and that too for detention of two days and more. Since most of the wagons were detained upto two days, even the impact of fixation of rates more than the earning capacity was almost negligible.
- However, in January 2006, the rates were further decreased and a uniform rate irrespective of the quantum of detentions was adopted, equivalent to only 44 per cent of the earning capacity. Thus, the demurrage rates were fixed at such levels that would neither serve as a deterrent to the parties nor adequately compensate the Railways for the loss of earning capacity. Moreover, a uniform rate irrespective of period of detention does not serve as an adequate disincentive to the parties to release the wagons at the earliest.
- The loss of earning capacity due to fixation of such low demurrage rates at less than the earning capacity amounted to Rs.1581.17 crore during the three year period from 2003-04 to 2005-06.

(Annexure XVII)

- Moreover, even this levy of demurrage charges were not realised in full. A test check of 60 sidings revealed that out of a total amount of Rs.167.40 crore accrued during the three years 2003-04 to 2005-06 (as recoverable from public as well as private sidings) Rs.94.07 crore was waived. While

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the percentage of waiver in respect of private sidings was 49 per cent, the waiver in respect of public sidings was to the extent of 60 per cent. Thus, the levy of low charges compounded by the high waiver undermines the rationale for levy of demurrage.

(Annexure XVIII)

During discussions with the Railway Board (December 2006) it was stated that the quantum of demurrage waived was based on circumstances such as regularity of loading, future prospects of traffic and to avoid diversion of traffic to road. However, the fact remains that heavy waivers vitiate the concept of levy of demurrage and would not serve as a disincentive for wagon detentions, which have a direct impact on railway earnings.

Recommendations

The creation of additional facilities in consultation with the parties involved should become a priority area of action, since the wagons in most of cases are detained for want of adequate facilities for handling.

1.11 Conclusion

The pilot project of enhancing the quantum of iron ore and coal to be carried per wagon was defective to the extent that the conditions laid down for improvement of track and monitoring were not complied with. Overloading was seen even beyond the enhanced limits which would result in serious damage to infrastructure.

In the rationalisation of freight, Audit observed that while re-classifying the commodities, Railways had not carried out a proper analysis of freight per wagon earned and the freight likely to be earned after revision in classification. This has reduced Railways earnings in respect of certain commodities considerably. Moreover, non provision of separate wagon load class for commodities placed in the highest class has resulted in undue advantages to consigners and impacted operational efficiency. This has also abolished the impact of punitive measures in case of non-compliance of conditions laid down for availing the benefit of train load rates.

The procedure of wagon procurement was found deficient as the suppliers in the public sector were not adhering to the time schedules thereby hampering railway requirements. Wagons already available in the Railway network were also not utilised effectively and there was heavy detention at loading and unloading points as well as when taken up for maintenance and periodical overhauling.