# Chapter III Adequate availability of wagons and their effective utilisation

## Audit Objective 2

Adequate wagons and locos were available for meeting the demand for freight loading and the wagons were utilized optimally

Adequate availability of locomotives and wagons as well as appropriate paths is an essential requirement for movement of goods trains. On the basis of available wagons for operational activities with Zonal Railway, Railway Board distributes newly built wagons amongst Zonal Railways. Railway Board also allows transfer of wagons from one Zonal Railway to another zonal railway keeping in view the demand of goods traffic in Zonal Railways. Further, freight business which is the major source of revenue for the Indian Railway is dependent on main activity centres of freight operation namely terminals, yards, control office and stations (Goods Sheds/Sidings). From the customer's perspective, efficient utilisation of wagons that ultimately should get translated into efficient and effective delivery of freight services, which implies provision of a reliable and timely service.

## 3.1 Allocation of Wagons amongst Zonal Railways

It has been mentioned in Para 2.1 and 2.2 that the Planning process for the wagons commences with the task of forecasting the growth of freight traffic area-wise, on the basis of analysis of past trends and the likely condemnation of the wagons every year. No assessment of requirement was, however, done at Zonal Railway level.

Since no Zonal requirement is available, wagons are distributed to Zones based on the traffic requirement. Railway Board allotted 77639 newly built wagons among Zonal Railways during the years 2008 to 2013. A review of the position of wagons allotted by Railway Board and those inducted in to the Railway system revealed the following:-

- Out of 77639 new wagons allotted by the Railway Board to various Zonal Railways, 53,539 wagons (69 per cent) were inducted in to the Railway system with in a period of one year and the remaining wagons were inducted in the subsequent years.

- Delay in induction of the 15815 wagons in the Railway system led to avoidable loss of earning capacity of ₹ 1,635.67[12] crore in seven Zonal Railways[13]. No wagons were allocated to NR during the period 2008-13, while details on the delays in induction of wagons in eight other Zonal Railways were not available on record.
- Wagons were allotted (by Railway Board) to Zonal Railways based on the trend in the traffic handled by the individual zonal railways. Zonal Railways did not assess their requirement of wagons at all during the period of review and hence Audit could not verify whether the allotment of wagons to Zonal Railways was proportionate to their requirement.
- Out of 200 BOXNHL wagons allotted to NWR by Railway Board in June 2008, 77 wagons (38.50 per cent) were yet be inducted even after a lapse of over 5 years.
- Delay in induction of 4210 wagons on two Zonal Railways[14] ranged between two to four years since their allotment by Railway Board. The reasons for delay in induction of wagons were not found on record in Zonal Railways.
- Out of 8945 wagons allotted to ECoR, only 5122 wagons (57 per cent) were inducted in to the Railway system within time frame of one year and 3823 wagons[15] (42.74 per cent) were yet to be inducted (March 2013).

## 3.2 Utilization of Wagons

Freight traffic is the major source of revenue for IR and hence improving wagon utilization is the key to enhancing the overall transportation performance of IR. Poor utilization of wagons affects the availability of wagons. A close and regular watch, well-organized day to day management leads to better mobility and utilization of the wagon stock and in turn to a more efficient and economical railway operations. Ready availability of wagons, their optimum utilization with minimum detentions and reduction in empty haulage of wagon stock are crucial for profitable operation of goods trains. For achieving optimal wagon utilization, the wagons from all Zonal Railways are 'pooled' together and scheduled for running of goods trains without discrimination or preference by a zone to the wagons it owns.

[12] Earning capacity loss has been worked out on the basis of earning of a wagon per day on line as given in statement 15 and 24 of the Annual Statistical Statement of Indian Railways for the respective years

[13] (ECOR- 300.5 crore ,SCR-82.6 crore, SECR-672.44 crore, SER-260.04 crore, SWR-82.35 crore, WR-1.74 crore, NWR-236 crore)

[14] (ECOR- up to 3 years 5 months, SWR – up to 2 years 8 months)

[15] Comprising of 665, 242, 244, 2322 and 350 wagons allotted in 2008-09, 2009-10, 2010-11, 2011-12 and 2012-13 respectively.

### 3.2.1 Availability of wagons on demand by parties

Parties place their indents for rakes in the form of forwarding notes to Chief Goods Supervisor of the respective goods sheds and sidings. Forwarding notes are entered in the Demand/ Priority Register and updated in Freight Operations and Information System (FOIS[16]). Daily position of indents is intimated to the Division. Senior Divisional Operating Managers arrange for allotment of rakes as per the availability on daily basis.

Movement of freight traffic is regulated by the Schedule of Preferential Traffic, laid down by the Central Government (Railway Board) under Section 71 of the Railways Act, 1989. As per the Preferential Traffic Order issued from time to time, traffic is classified into four categories viz., A, B, C and D. Commodities registered in the higher categories have preference over those registered in the lower categories.

As already mentioned in Para 2.1 and 2.2 that although Zonal Railways are required to assess and communicate their wagon requirement to Railway Board but they had not endorsed their demand for wagons in specific numbers. It was, however, observed that over all wagon requirement is being assessed in Railway Board on the basis of trend in growth of traffic which happened to be around eight per cent during the period under review.

A review of indents placed and rakes supplied at sixty four selected loading points (29- Goods sheds, 35- Private Sidings) during 2011-12 to 2012-13 revealed that:

- Indent/priority registers are being maintained and the rakes are being supplied as per the priority (preferential traffic order) prescribed under rules. A total of 16541 rakes were demanded by various parties at 29 selected goods sheds, out of these, 14904 rakes (90 per cent) were allotted and remaining 1,637 rakes (about 10 per cent) were cancelled as the demand was not met by the Railway Administration. (Annexure 1)
- Similarly, an analysis of demand and the supply position by Railways in 35 selected private sidings revealed that out of the 82,747 rakes demanded by siding owners, 80399 rakes (97 per cent) were allotted and remaining 2,348 rakes (3 per cent) were cancelled due to failure of Railways to meet Party's demand.(Annexure 1)

[16] IR carries nearly 1012 million tonnes of freight across its network in a year that includes major commodities like Coal, Iron Ore, Cement, Fertilisers, Food Grain and Petroleum products in the specialized wagons. Based on this information the managers make Allocation decisions to optimize utilization of resources like wagons, locomotives, crew and path on the IR's network. Real time information is facilitated by the system called FOIS that allows optimal decision making and thus ensuring high level of mobility within the system.

- In SWR, delay in allotment of NMG wagons resulted in cancellation of indents by the party during 2011-13 for 20 rakes. This resulted in Railway losing revenue to the extent of ₹ 2.28 crore.

Audit also conducted a test check of indents placed and rakes supplied during May, December and March months during the years 2011-12 and 2012-13 at the 64 selected loading points. It was observed that against an overall demand of 20299 rakes, 19285 rakes (95 per cent) (**Annexure 2**) were supplied for loading to the various parties but in the four Zonal Railways the percentage of the demand met ranged between 78 and 87 resulting in loss of earning capacity to the tune of ₹ 11.58 crore in respect of the demand for rakes not met by the Railways as indicated in the table below. Reasons for not fulfilling the demand were not furnished to Audit.

**Table 10** –Results of the test check in ZRs which could not meet the parties demand for rakes

| Railway | Year | No. Of rakes demanded | No. of rakes allotted | Percentage of demand not met | Loss of earning capacity (₹ in crore) |
|---|---|---|---|---|---|
| ER | 2011-13 | 748 | 578 | 23 | 2.21 |
| WCR | 2011-12 | 555 | 476 | 14 | 3.30 |
| ECR | 2012-13 | 688 | 617 | 13 | 3.06 |
| NCR | 2012-13 | 312 | 242 | 22 | 3.01 |
| Total | | | | | 11.58 |

*Source:-Information gathered by the audit in Zonal Railway concerned*

MoR in their reply (September 2014) stated that in many cases the party puts additional demand/indents and before the Railways could allot the rakes, the party cancels the indents. This reflects that demand was not met by the Railway Administration. Contention of the Railway is not acceptable as the indents for rakes were cancelled by the parties subsequently as Railways could not meet the party's demand for rakes.

### 3.2.2 Analysis of efficiency parameters /indices in respect of locos and wagons:

Railway Board has set efficiency parameter indices to ensure efficient utilization of wagons. Performance of Zonal Railways under various parameters such as (i) ineffective percentage, (ii) detachments, (iii) train partings, (iv) spring breakages, (v) hot axles and (vi) poor brake power etc are evaluated. Audit reviewed the performance of the Zonal Railways with reference to the parameters. Analysis of information captured on various efficiency parameters in different Zonal Railways during the period from 2008-09 to 2012-13 reveals the following position.

## (a) Wagon Turn Round (WTR)

Wagon turn-round is the interval of time between two successive loadings of a wagon. The reported wagon turn round statistics in most of the zones ranged from 1.18 to 3.43 days during 2008-13, where as the All India Average during this period ranged between 5.19 to 5.08 days. This implies that the data reported upon by the Zonal railways cannot be relied upon.

While 13 Zonal Railways[17] have shown improvement in WTR in the year 2012-13 as compared to 2008-09, there was declining performance in the remaining three zones. In 12 zones[18], though there was improvement in WTR during the period, yet the target set was not achieved.

MoR in reply stated (September 2014) that achievement of turnaround targets by zones are affected by changing traffic patterns and are often beyond their control. The growth of passenger and freight traffic on IR has been much faster than the growth of network and loading & unloading terminals. Remarks offered by MoR in reply highlights the constraint faced in increasing efficiency in this regard.

## (b) Hot Axles

These are mechanical failures on account of the defects developed in the bearing of the wheel set mainly by heavy loading of wagons. This result in emanating smoke from the axle of a wagon and wagon may catch fire. Incidence of Hot Axles has a cascading effect on all the trains running in that section. Apart from the damage to the rolling stock and Permanent way material, namely track and its components, Hot Axle cases result in detention of rakes as the affected wagon is required to be detached from the rake for carrying out the necessary repairs. Review of hot axles cases during the period 2008-13 revealed the following:-

- Number of hot axles increased significantly in 13 zones, viz., ECoR (44 to 76), CR (76 to 115), ER (10 to 19), NCR (103 to 122), NEFR (16 to 33), NER (1 to 22), NR (41 to 82), NWR (22 to 38), SCR (12 to 31), SER (32 to 47), SWR (4 to 31), WCR (77 to 111), WR (72 to 94).
- Instances of Hot Axles substantially exceeded the targets in NR, NCR, NWR, ECoR, WCR and WR as indicated below:-

**Table-11**

Cases where Hot Axle incidences increased with respect to targets

| Zonal railway | Target | Actual | Per cent increase w.r.t targets |
|---|---|---|---|
| WR | 320 | 409 | 28 |
| WCR | 366 | 469 | 28 |

[17] (ECoR, CR, ER, NER, NWR,NEFR, NR, NEFR, SECR, SWR, SR, WCR, WR)
[18] CR, ER, NCR, NER, NEFR, NR, NWR, SECR, SCR, SWR, WCR and WR

| | | | |
|---|---|---|---|
| NR | 171 | 287 | 67 |
| NWR | 114 | 179 | 57 |
| NCR | 403 | 553 | 37 |
| ECoR | 181 | 272 | 50 |

*Source:-Information gathered by the field parties in Zonal Railway concerned*

- The increase was marginal in one zone, viz., SECR where the number of hot axles increased from 55 (2008-09) to 58 (2012-13).
- Incidence of Hot Axles has a cascading effect on all the trains running in that section. Apart from the damage to the rolling stock and Permanent way material namely track and its components, there would be a financial impact on account of repairs involved in the wagons affected due to hot axles.

Increased instances of hot axle cases are a clear indication of poor maintenance of wagons in terminal yards and workshops. Such cases results in detentions to trains as the wagons affected due to hot axle are required to be detached from trains. There would be a financial impact on account of the hot axle incidences. In the absence of the record relating to the actual time taken in replacing the wheel set and the wagon remaining out of service, the earning capacity loss could not be worked out.

## (c) Detachment

During the train run sometimes the wagon gets detached due to coupler breakage. This affects the movement of trains following and is also a threat to safety. Railway Board has fixed their own targets for monitoring the detachment cases but these targets varied widely amongst the Zonal Railways. Targets fixed and the actual numbers of cases of detachment of wagons occurring in the Zonal Railways are tabulated as follows:-

**Table 12** –Wagon detachment cases noticed in Zonal Railways

| Zone | Target (range during 2008-13) | Actual detachment cases during 2008 to 2013 | | | | |
|---|---|---|---|---|---|---|
| | | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| WCR | 370-250 | 257 | 261 | 270 | 238 | 233 |
| SECR | 170-140 | 106 | 162 | 137 | 79 | 104 |
| SER | 130-12 | 37 | 27 | 17 | 10 | 11 |
| SWR | 20-15 | 10 | 2 | 6 | 19 | 11 |
| SR | 150-60 | 56 | 47 | 51 | 47 | 53 |
| WR | 200-120 | 173 | 164 | 131 | 93 | 95 |
| ER | 20-10 | 16 | 5 | 4 | 1 | 1 |
| NCR | 400-190 | 261 | 176 | 190 | 178 | 160 |
| NR | 250-160 | 192 | 157 | 137 | 136 | 142 |
| ECoR | 230-112 | 98 | 108 | 89 | 86 | 78 |
| CR | 260-160 | 187 | 181 | 162 | 156 | 203 |
| ECR | 120-140 | NA | 74 | 68 | 61 | 184 |

| | | | | | | |
|---|---|---|---|---|---|---|
| NWR | 130-80 | 43 | 64 | 67 | 77 | 89 |
| NEFR | 60-50 | 34 | 22 | 42 | 54 | 41 |
| SCR | 70-40 | 16 | 24 | 21 | 25 | 36 |
| **Total** | | **1486** | **1474** | **1392** | **1260** | **1441** |

*Source:-Information gathered by the audit in Zonal Railway concerned*

An analysis of the above mentioned position by the Audit revealed the following:-

- Incidence of wagon detachment improved and remained within the targets during the period under report in 10 zones (WCR, WR, SR, ECoR, ER, NCR, NR, SECR, SER and SWR).
- In five zones[19], the performance deteriorated during 2008 to 2013 as the increased numbers of detachment cases were observed in these zones.
- The detachment cases declined from 1486 in 2008-09 to 1260 in 2011-12 but the same suddenly increased to 1441 in 2012-13. Further, 72 per cent of the detachment cases were seen six Zonal Railways[20] alone.

## (d) Train Parting

Train parting refers to detachment of entire rake or portion of rake from the engine. Varying targets were fixed by the individual Zonal Railways to monitor the train parting cases. Targets fixed by the Railway Board in respect of the train parting cases and the actual cases that occurred in Zones are tabulated as follows.

**Table 13** –Incidence of train parting cases in Zonal Railways

| Zone | Target (range during 2008-13) | Train Parting cases during 2008-13 | | | | |
|---|---|---|---|---|---|---|
| | | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 |
| ECoR | 60-70 | 53 | 68 | 74 | 74 | 70 |
| CR | 65-55 | 48 | 58 | 56 | 46 | 58 |
| E.C.R | 68-68 | NA | 58 | 67 | 89 | 79 |
| E.R | 30-18 | 18 | 11 | 19 | 14 | 15 |
| NCR | 70-60 | 60 | 60 | 64 | 59 | 45 |
| NER | 5 to 5 | 6 | 1 | 7 | 5 | 5 |
| NWR | 20-18 | 12 | 15 | 24 | 11 | 10 |
| NEFR | 0 to 7 | 2 | 3 | 4 | 9 | 1 |
| NR | 40-25 | 26 | 18 | 20 | 19 | 18 |
| SCR | 70-40 | 25 | 46 | 32 | 31 | 43 |
| SECR | 110-80 | 103 | 117 | 92 | 58 | 32 |
| SER | 210-80 | 156 | 157 | 93 | 62 | 62 |

[19] Increase in detachment cases -CR (187 to 203), NWR (43 to 89), NEFR (34 to 54), SCR (16 to 36), ECR (74 to 184).
[20] WCR, SECR, WR, NCR, NR and CR

| | | | | | | |
|---|---|---|---|---|---|---|
| SWR | 50-40 | 44 | 35 | 34 | 23 | 29 |
| SR | 70-40 | 52 | 37 | 26 | 19 | 18 |
| WCR | 70-55 | 62 | 45 | 54 | 40 | 51 |
| WR | 50-40 | 30 | 25 | 25 | 34 | 20 |

*Source:-Information gathered by the audit in Zonal Railway concerned*

From the above table it was observed that:-

- The targets fixed by Railway Board varied widely between 5 and 210 amongst the Zonal Railways. Train parting cases, however, exceeded the targets fixed on ECR and ECoR only.
- Six Zonal Railways[21] accounted for 64 per cent of the 3291 train parting cases noticed during the period under reference above.
- In as many as six zones (CR, ECR, NCR, ECoR, SER, and WCR), the train parting cases were more than 40 in all the years reviewed. SER recorded the highest number of train partings of 156 in 2008-09. Reasons for the same were, however, not available on record.

## (e) Spring Breakage

This relates to the mechanical failures due to breakage of springs. All mechanical equipments involving moving parts are susceptible to failure. Targets fixed for monitoring spring breakage by the Railway Board varied widely.

Position of the targets fixed and the actual spring breakage cases noticed in the Zonal railways during the period 2008-13 are indicated below.

**Table 14** –Spring Breakage cases noticed in Zonal Railways

| Zone | Target (range during 2008-13) | Actual Spring Breakage cases during 2008-13 | | | | |
|---|---|---|---|---|---|---|
| | | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 |
| ECoR | 25-00 | 8 | 1 | 4 | 0 | 0 |
| CR | 10-00 | 2 | 0 | 3 | 2 | 0 |
| ECR | NA - 1 | NA | 0 | 0 | 9 | 2 |
| E.R | 10-00 | 1 | 0 | 0 | 0 | 0 |
| NCR | 35-00 | 13 | 4 | 2 | 0 | 0 |
| NER | 00-00 | 0 | 0 | 0 | 0 | 0 |
| NWR | 15 - 2 | 12 | 4 | 1 | 0 | 0 |
| NEFR | 05 - 00 | 3 | 0 | 0 | 0 | 0 |
| NR | 85--00 | 61 | 46 | 19 | 4 | 0 |
| SCR | 15 - 00 | 0 | 0 | 0 | 0 | 0 |
| SECR | 15 - 5 | 2 | 2 | 0 | 0 | 0 |

[21] Train parting cases –SER, SECR, ECOR, CR, ECR and NCR

| | | | | | | |
|---|---|---|---|---|---|---|
| SER | 60 - 00 | 3 | 7 | 4 | 0 | 0 |
| SWR | 5 - 00 | 0 | 0 | 0 | 0 | 0 |
| SR | 70 - 00 | 47 | 38 | 53 | 0 | 0 |
| WCR | 60 - 00 | 10 | 12 | 10 | 3 | 2 |
| WR | 35 - 00 | 18 | 15 | 0 | 0 | 0 |

*Source:-Information gathered by the audit in Zonal Railway concerned*

It was observed from the data that on SR and NR the targets (in numbers) varied between 35 and 85 while in other Zonal Railways the target fixed ranged between 0 and 35. Cases of spring breakage were within the target in respect of ECoR, ER, CR, NER, NWR, NEFR, SCR and NR. On NR and SR, 130 and 138 cases of spring breakage were observed and were substantially higher in comparison to other zones.

Efforts were made to calculate the financial implications of spring breakage cases due to detention of rakes for rectifying the defect but the same was not found possible in the absence of information regarding period of detention, time taken in repairs and in putting the wagon back in service.

MoR in their reply (September 2014) stated that achievement of the wagon turn round target by the Zonal Railways are affected by the changing traffic patterns and are often beyond their control. MoR further stated that Railways have achieved an improvement in various efficiency indices. The fact, however, remains that increased instances of hot axles, train parting and wagon detachment cases were observed in many Zonal Railways.

### (f) Poor Brake power or the rakes found running without Brake Power Certificate

Brake Power Certificates (BPCs) are issued to the freight trains after examination, and remain valid either up to the destination or for a specified distance. On safety considerations, it is mandatory that freight trains are to be moved only after it is certified by train examination department up to the distance authorised. The BPCs become invalid when the distance/time prescribed in the certificate gets exhausted and it is not advisable to run the train beyond such point/day. Running of freight trains with invalid BPCs amounts to compromise with safety.

Audit undertook a review the FOIS data pertaining of 3734[22] Brake Power Certificates (BPC), issued during May, October and December of 2011-12 and 2012-13 by various stations of all Zonal Railways except NER & NWR where database did not contain BPC data having validity in terms of 6000 and 7500

[22] 1957 Brake Power Certificates (BPCs), having validity of 6000 kilometers and 1772 BPCs with a validity of 7500 kilometers issued during May, October and December of 2011-12 and 2012-13

kilometres. Scrutiny in audit revealed that the Goods Trains travelled 500 kms in excess of the distance authorized under BPC as indicated below:-

**Table 15** –Position indicating the rakes shooting up the distance authorized under BPC

| BPC limit (Kms) | Number of rakes with BPCs issued | Number of trains travelled distance in excess of that authorized under BPC | Excess distance travelled by train than authorized under BPC (Range in kms) |
|---|---|---|---|
| 6000 | 1962 | 770 (39 per cent) | 789 to 884 |
| 7500 | 1772 | 662 (37 per cent) | 534 to 996 |

*Source:-Information gathered from the FOIS data by the audit in Zonal Railway concerned*

Happening of any untoward incidence due to invalid BPC will adversely affect the train operations besides financial losses as a result of damage to track and rolling stock.

MoR stated (September 2014) that there may be cases where BPC issued for 6000/7500 kms gets expired enroute. MoR added that Zones are advised to closely monitor the expiry of the BPC and offer rakes for examination as and when the BPC expires to ensure the safety of the trains. In view of the fact that in an audit of FOIS data in respect of 3734 rakes, more than 35 per cent of the goods trains were found to have travelled distance ranging between 500 and 996 kms after expiry of BPC, MoR needs to put in place an effective monitoring system.

In respect of the audit contentions on the efficiency parameters like Hot Axles, Detachment of wagons, Train parting cases and spring breakage, MoR has replied (September 2014) that wagon holdings and the Net tonne Kilometers (NTKMs) have been increasing over the years. Further, wagon stock has been upgraded and axle load has also increased. Despite this, the cases of Hot Axles, Spring Breakage etc has come down as compared to 2002-03. MoR in their reply broadly agreed with the data on various efficiency indices given by audit but the reply is general in nature and has no reference to the cause and effect of poor performance of efficiency indices with in the zones. Further, reply of MoR is silent on the issue of differential targets fixed for measuring the operational performance. MOR's contention that with the improved technology and better maintenance, IR have been able to achieve improvements does not completely hold good since the efficiency indices in some Zonal Railways reflected not so convincing performance regarding hot axles, detachments and train parting cases.

### 3.2.3 Empty movement of Goods trains

Empty running of wagons is wastage of transport capacity but inescapable on account of unbalanced nature and quantity of outward traffic and inward traffic at terminals and need to supply empty wagons.

Dynamic Pricing Policy was announced in Railway Budget 2006-07, which included incentives in Empty flow directions. These are traffic movement streams comprising predominantly of empty wagons. This was a part of the Volume Growth Incentive Scheme[23]. Audit had pointed out in Para 1.9.3.1 of the Audit Report No. 8 of 2010-11 that the freight schemes were operating sporadically in some zones and volume growth incentive schemes were not operational in any of the 16 zones. The position of empty/loaded running of wagons on all Zonal Railways for the period from 2008-09 to 2012-13 is shown in the following table.

**Table 16** –A comparison of loaded and empty wagon kilometers

| Year | Wagon km loaded (in lakh km) | Total Wagon km (loaded +empty) in lakh km | Percentage of loaded km to total km | Percentage of empty km to total km |
|---|---|---|---|---|
| 2008-09 | 91187.71 | 137710.60 | 66.22 | 33.78 |
| 2009-10 | 97950.59 | 184765.35 | 53.01 | 46.99 |
| 2010-11 | 101605.48 | 150886.13 | 67.34 | 32.66 |
| 2011-12 | 108840.88 | 162974.13 | 66.78 | 33.22 |
| 2012-13 | 112019.47 | 169335.30 | 66.15 | 33.85 |

*Source:-Annual Statistical Statement of Indian Railways*

Total wagon km and wagon km loaded increased steadily during the five year period. There was a sharp increase of over 13 per cent of empty km to total km in the year 2009-10 as compared to the previous year. An empty run of wagons would result in loss of earnings. Hence, the IR needs effective monitoring to minimise empty running of wagons.

Accepting the fact in their reply (September 2014) that empty running of rakes is in-escapable, MoR stated that close monitoring is done to ensure that indents in the empty directions are met with. The fact remains that percentage of empty kms to total kms remained static at 33 during the period 2008-13 (except for the year 2009-10) and the Railways have not been able to bring down the empty movement of trains.

[23] Policy Guideline issued by Ministry of Railways vide letter No.TCR/1078/2006/4 New Delhi, dated: 28.03.2006.

### 3.2.4 Speed of goods trains

Speed of goods trains is one of the vital factors of efficient goods train operation. Speed of goods trains is also governed by various factors like crossing/precedence, crew change, asset failure, non-acceptance by other Railways due to bunching etc., IR made efforts for improvement in speed of goods trains which included induction of higher horse power locomotives, replacement of four wheeler wagons with high capacity air brake eight wheeler wagon stocks, modernization of workshops and introduction of FOIS application, etc., The improvements though not quantifiable, were intended to facilitate higher productivity and mobility.

Audit also analyzed the position of movement of 6730 loaded goods trains those originated and terminated in seven Zonal Railways. Zone wise position is tabulated below:-

**Table 17** –A comparison of the average speed of the Goods trains

| Average speed (km/ph) | No. of Trains runs | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **NR** | **ECOR** | **CR** | **SECR** | **SER** | **SCR** | **SWR** | **Total** |
| Between 1 and 20kmph. | 367 | 1485 | 577 | 710 | 428 | 784 | 411 | 4762 |
| More than 20 and up to 40 kmph | 160 | 126 | 73 | 153 | 315 | 194 | 103 | 1124 |
| More than 40 and up to 100 kmph | 37 | 18 | 69 | 167 | 25 | 507 | 19 | 842 |
| **Total:** | **564** | **1621** | **719** | **1030** | **768** | **1485** | **533** | **6730** |

*Source:-Information gathered by the audit in Zonal Railway from FOIS data*

It was observed through the FOIS data of February, 2012 that in seven Zonal Railways[24] out of 6730 trains run during the month, the average speed was up to 20 kmph for 4762 trains (71 per cent), between 20 to 40 kmph for 1124 trains (17 per cent) and between 40 to 100 kmph in respect of 842 trains (12 per cent).

Goods trains are non scheduled trains and in many cases as observed in field offices in Zonal Railways, the passenger trains are given preference for passage resulting in halt or slowing down of the goods trains. Besides this, the trains were detained enroute for various other reasons which include saturated line capacities due to increased traffic density, change of traction, non availability of path and non availability of crew etc. A review of the FOIS data in respect of the goods trains run during February 2012 in audit for mapping the goods train movement revealed the following:-

- One rake originating in Ajmer Division in NWR took 21 hours in reaching its destination at a distance of 442 kms from the originating station. An enroute detention for a period of 14 hours and 25 minutes was noticed.

[24] NR, ECoR, CR, SECR, SER, SCR and SWR

- At 11 out of the 31 enroute stations, the detentions of goods trains in SCR ranged between two minutes to 16 hours.
- In SR, as many as 15 trains were detained abnormally (i.e beyond 20 hours) the reasons for which were not recorded. An analysis of the distance covered and the time taken by the trains which originated and terminated between same pair of stations revealed a wide variation in the time taken by them in travelling from the originating stations to destination stations.
- 32 trains were detained for more than 24 hours in NR and of these 15 trains were detained for the period ranging between 51 to 195 hours.
- In respect of 11 rakes in ER, where the distance covered from the originating to destination station was same, the difference in time taken varied between 0 to 89 hours.

From the above it transpired that the detentions of goods trains resulted in slowing down of the average speed. Though the permissible speed limit was 60 km per hour, the average Speed of goods trains on IR remained almost static at around 25 km during the years 2008-09 to 2012-13 and no perceivable results were noticed in this regard despite the induction of High Horse Power locomotives in the last decade. This shows that the Railway had no strategic and long term planning for improving the average speed of Goods Trains.

MoR replied (September 2014) that audit has conducted a check on the speed of the goods trains during the month of February during which the speed of the trains are generally affected in the northern part of the country due to restricted visibility. The contention of MoR is not acceptable as audit analysis is based on the study of movement of goods trains those originated and terminated in their respective Zonal railways and the zones like CR, SWR, SCR, ECoR and SER are not affected by the restricted visibility as claimed by MoR.

However, MoR further responded that to overcome the congestion issue third and fourth lines are being developed and that development of Dedicated Freight Corridor is also a step in this direction.

### 3.2.5 Detention during Loading/ unloading operation

In the White Paper the operational strategies adopted by IR included improving wagon mobility and availability by reducing terminal detentions by increasing goods sheds working hours, improving the infrastructure at the goods sheds; rationalizing maintenance practices by extending the maintenance cycle of closed circuit rakes.

Effective utilisation of assets calls for supply of rakes to customers as per demand and delivery of consignments at the destination minimising the enroute detentions to rolling stock.

Hence timely loading/unloading of wagons is necessary to make the wagons available for further loading. Railways have laid down norms for permissible detention for various types of wagons during loading and unloading operations in sidings/goods sheds.

**Detention on Railway Account**

Detention occurs either on Railway's account or party's account. Terminal detention under "Arrival to placement" and "Release to Dispatch" occurs on Railway Account. No free time has been prescribed for any of the two stages. Immediate action is required to be taken by the Railway Administration for placing the rake for loading/unloading once the rake arrives in goods shed or siding. Similarly, once the wagon has been released after loading /unloading the same has to be dispatched for its new destination.

**Detention on Party Account**

Detention under "Placement to release" occurs on party's account and mainly occurs during loading/unloading operations. A period of five to 11 hours is allowed as free time for loading or unloading depending upon the type of wagons. Demurrage is levied on parties as per rules to discourage parties from taking excess time. Abnormal terminal detention leads to under utilization of wagon stocks and loss of revenue in turn.

Analysis of data on average terminal detention at 128 loading /unloading points in 16 Zonal Railways during the period from 2008-09 to 2012-13 revealed that:

- In order to release the wagons speedily from goods sheds without idling them during night hours and to make available the wagons to another party for use Railway Board introduced a concession of reckoning only 50 per cent of the time taken for loading/unloading during night hours at these goods sheds. So, if the parties loaded/unloaded the goods after 22.00 hours, the time taken from 22.00 hours to 06.00 hours will be reckoned only 50 per cent i.e. the eight hours time will be reckoned as 04.00 hours only for calculating the free time allowed for the parties for loading/unloading. Audit observed that on SCR though the parties had availed 50 per cent concession in the time taken for loading/unloading during night hours, they were not actually undertaking any loading/unloading operations during night hours. The loading/unloading operations were actually done at 06.00 hours only as per the record maintained in Block Rake Register/Wagon Exchange Register. This has defeating the very purpose of the Railway Board orders i.e. speedy release of wagons and making them available to other parties.
- On an average 8.19 lakh wagon suffered detentions in goods sheds and sidings over IR during the loading and unloading operations. The average detention

was more than 24 hours in respect of 32 per cent of the wagons dealt with at various loading and unloading points during the period 2008-13.

- Audit scrutiny of the record at the selected loading /unloading points for the period 2011-12 and 2012-13 revealed that 30 and 21 per cent of the wagons dealt with at selected loading and unloading points respectively suffered detentions. These detentions resulted loss of earning capacity to the tune of ₹ 852.75 crore during 2011-13.(Annexure 3)
- Average detention during the loading operations ranged between 12 and 86 hours. During unloading operations, the average detentions to wagons ranged between 13 to 141 hours.
- Further, analysis of the stage wise detentions to wagons in audit revealed that wagons suffered detention after allowing for the free time allowed[25] for different activities.

**Table 18** –Statement showing the average detention during loading and unloading operations

| **Average detention on Railway Account** | | | **Average detention on party Account** |
|---|---|---|---|
| **Loading/ Unloading** | **Arrival to placement** | **Release to dispatch** | **Placement to Release Free time allowed =5 to 11 Hour)** |
| Loading | 0 hrs 32 min (WCR-2011-12) to 10 hrs 15 min (NEFR-2011-12) | 0 hrs 49 min (NR-2010-11) to 21 hrs 03 min (NEFR-2012-13) | 5 hrs 03 min (ECOR-2010-11) to 56 hrs 32 min (NR-2009-10) |
| Unloading | 0 hr 38 min (WCR-2009-10) to 15 hrs 7 min (NR-2009-10 | 1 hr 28 min (NER-2009-10) to 11 hrs 4 min (SWR-2009-10) | 9 hrs 27 min (ECOR-2008-09) to 124 hrs 12 min (NR-2011-12) |

*Source:-Information gathered by the audit in Zonal Railway concerned*

- Report No. 8 of 2010-11 had a mention about IR accepting the fact that the sudden jump in loading resulted in shortages of locomotives and rolling stock and that the number of driving units in the system was substantially less than the number of rakes and thus detentions to rakes were unavoidable. Though IR claimed that by prioritizing facilities at terminals, detentions were reduced, Audit observed that the average detention from the placement of rake to their release continued to be beyond the envisaged time of 16 hours in a substantial number of terminals, indicating that the loading/unloading facilities were deficient in the freight terminals**.**

MoR in their reply (September 2014) stated that meticulous planning is done at Divisional and Zonal Railway level to ensure the detentions on Railways' account at minimum but under certain circumstances beyond the control, the detentions

[25] A period of five to 11 hours is allowed as free time for loading or unloading depending upon the type of wagons. A time period of one hour is allowed as free time for the rakes from arrival to placement and from release to despatch

occur for removal of rakes. MoR added that detention of rakes is attributed to the following reasons which are beyond the control of Railways:-

- Poor clearance by loading/unloading parties
- Non availability of labour for handling the cargo
- Environmental phenomenon like rains
- Non availability of permission of movement of heavy vehicles in case the terminal are located inside the city limits.

From the record made available to audit detention of rakes was also attributed to reasons like shortage of path ahead caused by the heavy density of coaching trains, severe water logging delays in coal tippling due to presence of big boulders, frequent power failures, lack of approach roads and mechanical problems like knuckle drops, brake binding and locker problem. Such issues could have been tackled by Railways with some sincere efforts in this regard.

### 3.2.6 Detentions in Terminal Yards

The goods train having started from the originating stations got detained at the terminals en-route. Review in audit of cases of detention of wagon stocks in 32 selected terminal yards over IR for the period 2008-13 revealed the following:-

- Railway Board did not fix any norms for permissible detentions of wagons in the terminal yards. Further, five Zonal Railways[26] adopted of their own norms for detention to wagons in the yards in respect of seven yards. The norms fixed by these Zonal Railways varied[27] between 1 and 24 hours. Actual detention exceeded the norms fixed for these seven yards ranging between 1.46 to 36.53 hours.

- Average detention was even higher than 15 hours in five terminal yard in ER, NWR and SWR.

- Detentions of wagons in excess of the norms prescribed by Central and Western Railway Administration resulted in loss of earning capacity of ₹ 105.72 crore during the period 2008-13.

**Detention of wagons at en-route stations**

FOIS data was intended to capture detention at en-route stations. A test check of record maintained in FOIS during February 2012 on detentions at the enroute stations in seven Zonal Railways (NWR, SR, SWR, SECR, NFR, ER and ECoR) revealed the following:-

- In NWR, seven good trains were detained at en-route stations between six and 22 hours. Although en route detention station wise are fed to FOIS database

[26] ECOR-1, CR-2,ECR-1,ER-1,WR-2
[27] ECoR-one hour;ECR-8 hours; WR-10 hours, CR-15 hours and ER -24 hours

through TMS locations/ Divisional FOIS cell, no such report was made available to audit.

- In SR, stopping of the goods trains at certain way side stations was noticed as the trains were often stopped frequently for long hours. The only reasons for these stoppages were to give way to the passing mail/express passenger trains. Break-up of such detentions is as follows:-

**Table 19** –Details of the enroute detention of the trains as studied on SR

| Duration of stoppage | Number of trains | Total time in hours | Average detention hours |
|---|---|---|---|
| Within an hour | 40 | 20:54 | 0:31 |
| One to three hours | 50 | 84:36 | 1:41 |
| Three to ten hours | 22 | 109:21 | 4:58 |
| Beyond 10 hours but within 24 hours | 8 | 104:41 | 13:05 |
| Beyond 24 hours | 1 | 148:51 | 148:51 |

Source:-Details collected from FOIS data

- A test check of details in respect of five trains in SWR revealed that the goods trains were detained at the enroute stations for the period ranging between 25:40 to 81:10 hours.
- A test check of details in respect of five trains in SECR revealed that the goods trains were detained at the enroute stations for the period ranging between 28:60 to 54:55 hours. Further, variations were observed in respect of data on the hours of detention at enroute stations maintained in FOIS and that maintained manually. No specific reasons were offered by the Railway Administration in respect of enroute detention of goods trains.
- Review of detention details in respect of two goods trains in NFR revealed that the trains were detained at the enroute station for a period of 4.40 hours.
- In as many as seven trains run during February 2012 in ER, enroute detention ranging between 29 hours and 32 hours was observed. Reasons for the detention were, however, not found on record.
- Review of control charts for 7-2-2012 for Talcher to Paradip section as made available by Control of Khurda Road Division of ECOR revealed that en route detentions were on account of bunching of trains and low precedence of goods trains over coaching trains. Goods trains were detained at various intermediary stations between Cuttack and Paradip due to passing of coaching trains at Cuttack.

In reply MoR stated (September 2014) that it is not possible to fix norms for the permissible detention at terminals yards as the movement of goods trains is

different from that of passenger trains and added that trains are required to stop at the en-route stations for the reasons like change of traction, change of crew, passage given to passenger trains. Reply of MoR is, however silent on the abnormal detentions as pointed out by Audit.

## 3.3 Inadequate basic infrastructure in sidings/ good sheds

Sidings/Good sheds need adequate infrastructure like full rake facilities, pucca circulating area, lighting, etc., to minimize wagon detention during loading/unloading. Inadequate infrastructure in the sidings/ good sheds contributes to detention to wagon stocks during loading / unloading operation. Assessment of the availability of the infrastructure provided at 128 selected loading/unloading points (53-goods sheds and 75-Private Sidings) with high volume of traffic done by Audit through physical verification revealed that loading/unloading points were deficient in required basic infrastructure. A review of the Goods Sheds and Sidings revealed deficient infrastructure as brought out below:- (**Annexure 4)**

**Table 20** –Position of availability of infrastructure facilities in goods Sheds and Sidings

| **Description** | **Infrastructure-wise deficient Goods sheds and Sidings** |
|---|---|
| Full rake facilities | 13 Goods Sheds in seven zones |
| | 10 sidings in nine zones |
| Rail level /High level platform | 01 (GS) in one zone |
| | 10 (Sdg) in 5 zones |
| Pucca circulating area | 16(GS) in 9 zones |
| | 19 (Sdg) in 10 zones |
| All weather approach Road | 11 (GS) in 7 zones |
| | 16 (Sdg) in eight zones |
| Lighting including lighting facilitating loading | 05 (GS) in four zones |
| | 8 (Sdg) in 5 zones |
| Merchant Room | 18 (GS) in 12 zones |
| | 47 (Sdg) in 15 zones |
| TMS FOIS connection | 02 (GS) in two zones |
| | 10 (Sdg) in six zones |
| DOT phone with STD facility | 24 (GS) in 13 zones |
| | 42 (Sdg) in 14 zones |
| Cool drinking water, wash room facility | 27 (GS) in13 zones |
| | 32 (SDG) in 14 zones |

GS –Goods Sheds; SDG –sidings (Zonal Railway position indicated in Annexure 4)

As such, these basic amenities were not provided in a substantial number of terminals as shown above thereby adversely affecting placement, removal, loading/ unloading operations causing detention to rakes.

MoR in their reply (September 2014) stated that some of the goods sheds developed in the early years with half rake handling facilities could not be developed for full rake due to in-sufficient space. Further, MoR added that efforts are being made to ensure that all facilities are made available in goods sheds and for the labour working therein. Private Freight Terminal (PFT) facility has been notified to encourage private participation in developing freight terminals.

However, the fact remains that a substantial number of terminals were not provided with even the basic facilities and IR needs to scale up its investment in traffic facilities as pointed out in the report.

## 3.4 Late start of Goods Trains

Late start of goods trains causes detention to wagons in the yard leading to under-utilization of wagon stocks. On this issue the position of 119 selected loading points/ unloading points (out of 128) for 2010-11, 2011-12 and 2012-13 was test checked following observations are made:-

- From the table below it may be seen that in 14 out of 16 Zones more than 50 per cent of the trains started late for want of locos. 18 per cent of the trains started late due to non availability of the clear path and crew. Number of trains stated late and the reasons attributed there- for are tabulated as follows.

**Table 21** –Instances of late start of Goods trains in 14 Zonal railways

| Zonal Railway | Number of trains started late | Number of trains started late | | | |
|---|---|---|---|---|---|
| | | for want of Locos | for want of crew | for want of Path | for any other reason# |
| 1 | **2** | **3** | **4** | **5** | **6** |
| ECoR | 5437 | 2408 | 2323 | 706 | 0 |
| CR | 12391 | 8909 | 1566 | 1523 | 393 |
| ER | 6039 | 4570 | 1398 | 0 | 1416 |
| NCR | 4106 | 754 | 1335 | 1762 | 255 |
| ECR | 8992 | 2778 | 4032 | 1027 | 2 |
| NWR | 6143 | 3080 | 162 | 225 | 2676 |
| NEFR | 18454 | 74 | 721 | 4667 | 11794 |
| NR | 3682 | 143 | 45 | 160 | 3334 |
| SCR | 24379 | 20875 | 8327 | 733 | 0 |
| SECR | 30031 | 30031 | 0 | 0 | 0 |
| SER | 25513 | 42 | 0 | 19 | 25452 |
| SWR | 28918 | 24717 | 4956 | 3254 | 641 |
| WCR | 7698 | 7698 | 0 | 0 | 0 |
| WR | 7958 | 5790 | 358 | 2257 | 367 |
| **Total** | **224599** | **141900** | **25223** | **16333** | **46330** |

# Trains starting late due to combination of reasons given in column 3, 4 and 5, preparation of Guard Driver Joint Report, maintaining of vacuum/pressure. Source-Zonal Railways record

- It is surprising to note that, although 1423 and 1288 number of diesel and electric locomotives were been added to the IR system during 2008 to 13, the late start of trains in a large number of cases is being attributed to non availability of locos.

**Analysis of Freight Operations and Information Systems (FOIS) Data**

- FOIS application has provision for entering the code for reason for late start. The analysis of the FOIS data for the month of February 2012 revealed that the required codes depicting the specific reason for late start of the trains was not filled in several cases. Non-filling of this vital information in FOIS deprived the Railway Administration of useful data analysis and corrective action in future operations.
- Study of the FOIS data also revealed that even after train ordering, the trains were not started, loco not attached and crew not signed on timely. Delay of up to 19 hrs 37 min between ordering start of train and actual start of the train were noticed in Aditya Cement Siding in WR.
- Further, large variations were noticed in the data pertaining to late start of goods trains maintained at 12 selected loading points and that kept in the FOIS. It was observed in audit that two different set of figures were maintained in Goods Sheds and through FOIS in respect of trains starting late in NR and NWR.

**Table 22**-Statement showing the variation in the data maintained on late start of goods trains

| Zonal Railway | Year | No. of loading point test checked | Total number of trains run | | Number of trains started late | |
|---|---|---|---|---|---|---|
| | | | As per Goods sheds record | As per FOIS record | As per Goods sheds record | As per FOIS record |
| | 1 | 2 | 3 | 4 | 6 | 7 |
| NR | 2010-11 | Four | 1447 | 1639 | 1178 | 348 |
| | 2011-12 | | 1606 | 1923 | 1346 | 277 |
| | 2012-13 | | 1387 | 1747 | 1158 | 258 |
| NWR | 2010-11 | Eight | 2808 | 3858 | 3180 | 1454 |
| | 2011-12 | | 2965 | 4146 | 3210 | 1992 |
| | 2012-13 | | 2348 | 3683 | 2833 | 1907 |

*Source:-Record Maintained in FOIS and Goods Sheds*

In their reply MoR stated (September 2014) that in view of the present pattern of the freight traffic, detention of some of the freight trains on account of non availability of locomotives is unavoidable. Further, a large number of seasonal coaching trains are run every year and freight locomotives are used to run these trains thereby affecting the availability of locomotives for freight services. MoR

also added that despite adding new locomotives in the system this does not translate in to the equal number of driving units due to large number of condemnations.

Contention of MoR is not acceptable as the availability of locomotives to haul the freight trains is of prime significance since freight operations contribute for two-third of the earnings of IR. It would have been prudent if MoR had been more proactive in nurturing the freight service segment besides fulfilling the social obligation by running the passenger services. Further, MoR need to take care in planning for manufacture of locomotives duly considering the condemnation planned. Regarding the accuracy of the data on running of train fed in to the FOIS, MoR has accepted that FOIS is an evolving system and shortage of trained manpower sometimes lead to non entry of peripheral data in FOIS.

## 3.5 Unconnected wagons

Goods trains are scheduled to move from originating station to destination stations. Sometimes, the consignments do not reach the destination and remain unconnected. These unconnected wagons lead to idling /underutilization of wagons. As per the provisions of Commercial Manual (Para 2117, sub-para 7), unconnected wagons are to be connected within 72 hours. The Commercial department of the divisions has Non-Receipt cells to deal with the tracing of unconnected wagons. FOIS application was intended to serve all major aspects/ purposes of goods operation, including tracking of rakes/wagons on real time basis.

Analysis of the position of unconnected wagons and their detention in yards and goods sheds for three years from 2010-11 to 2012-13 revealed that out of 2552 wagons found un-connected over all Zones in IR, 876 wagons (34.33 per cent) in 11 Zonal Railways (ECoR, NR, NCR, NFR, NWR, SR, SCR, SER, SECR, WCR and WR) were connected beyond the prescribed period. The details in respect of connecting 533 wagons of NER and 88 wagons of NR were not available with the Railway

These unconnected 876 wagons remained out of service for the period ranging between 16 to 1271 days resulting in loss of earning capacity of ₹ 28.47 crore[28]. The time taken for tracing as many as 162 un-connected wagons in five Zonal Railways,[29] ranged between 105 to 1271 days. Further, 54 of these 162 un-connected wagons could be connected in the period ranging between 555 to 1271 days.

Audit scrutiny further revealed that in only three zones (NER, NEFR and SR) the facility available in FOIS to take action to identify and connect unconnected

[28] Loss of earning capacity=Number of wagons X average detention in days X average earning capacity of wagon per day=876X100X3250=₹ 28.47 crore

[29] NR-18, NCR-9, NFR-2, WCR-6 and WR-126

wagons was utilized. This facility was partially utilized in NR and SCR while none of the remaining 11 zones utilized FOIS to take action to identify and connect the unconnected wagons. Delays in identifying and connecting wagons led to idling of the revenue earning asset.

MoR replied (September 2014) that efforts are being made to enable automatic capturing of the train running data in FOIS by integrating with Control Office Application (COA) which would facilitate entry of data relating to wagon detachment and would reduce the instance of unconnected wagons in yards.

## 3.6 Recovery of demurrage charges

Free time is allowed for completion of loading/unloading operations at loading/ unloading points. If the loading/unloading operation is not completed within the scheduled free time, demurrage charges are to be levied from the parties at the prescribed rate. As per Railway Board instructions, waiver of demurrage charges should normally be done for the reasons which are beyond the control of consignor/consignee and for act of god/war. As per the procedure laid down in Indian Railway Code for Traffic (Commercial Department), application for waiver of demurrage charges are to be submitted to the Station Manager/ Chief Goods Supervisor within 10 days from the date of their accrual in case of Goods sheds and within one month in case of large sidings. Initial waiver of demurrage charges is done by the Division. In case the Consignor/Consignee is not satisfied with the decision of the lower authority, he can prefer an appeal to the higher authority twice after depositing the amount of demurrage charges not waived. Entire process of all appeals of demurrage charges should be completed within a time frame of six months.

The trend of accrual and waiver of demurrage charges as well as the causes of frequent accrual and waiver of demurrage charges in the selected 128 good sheds and private sidings over 16 Zonal Railways for 2008-13 revealed the following:-

- Demurrage charges of ₹ 1056.96 crore was accrued on 223208 rakes out of 450852 dealt with at 128 selected sidings/goods sheds during the period under review. Main reasons for frequent accrual of demurrage charges were labour problem, bad weather condition, congestion of unloading platform, local festivals, power failure, delay in coal tippling, traffic restriction during day time, rainy season, high temperature, severe cold, big size coal and foreign materials in empty wagons, bunching of rakes, agitation by local people, less transportation of coal and mechanical breakdown.

  Demurrage charges of ₹ 267.07 crore (25 per cent) were waived. The percentage of waiver of demurrage charges was highest in SCR (43.95 per cent) followed by NWR (40 per cent), NCR and ECoR (34 per cent), ECR (33 per

cent) and WR (30 per cent). Out of ₹ 789.89 crore accrued as demurrage charges, an amount of ₹ 53.06 crore still remains to be recovered from the Parties. **(Annexure 5)**

Audit observed that reasons given for accrual of demurrage charges were repetitive in nature such as "bad condition of approach road", "sheds not fully covered", "bad weather condition' and "inadequate lighting arrangements." It was noticed in audit that reasons like sticky and muddy coal, very old and worn out tipplers, insufficient stock in sidings, non-arrangement of transport and labour etc were recorded while seeking waiver of demurrage charges.

Further, the information was collected in respect of data of accrual, waiver of demurrage charges for the months September and March of 2011-12 and 2012-13 in selected cases where waiver has been more than 25 per cent of the amount of demurrage accrued. Analysis of the information gathered revealed that out of ₹ 40.72 crore accrued as demurrage charges, ₹14.19 crore (33 per cent) was waived. The percentage of waival of demurrage charges ranged between 7.84 (NEFR) and 46.62 (NCR).

- The rate of demurrage charge recovered was not commensurate with the loss of earning of wagons due to detention. Rates of demurrage charges was last revised by Railway Board in 2008 and fixed at ₹100 per wagons per hour and remained unchanged during the period of review. The earning capacity of wagon per hour as per Indian Railway Statistical Statement ranged between ₹110.49 (2008-09) and ₹ 146.63 (2012-13). The rate of demurrage charges was enhanced to ₹ 150 from 1.4.2013 which is marginally higher than the earning capacity of wagon per hour. The above aspect is clearly visible from the calculations made in audit as indicated below.

**Table 23** –Statement showing comparative analysis of demurrage charges and earning capacity of wagon

| Year | Demurrage charges | Earning capacity of the wagon | Average number of wagon attracting demurrage | Difference of Column 2 and 3 | Loss w.r.t difference in the earning capacity and rates for demurrage charges (in `) |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 2008-09 | 100 | 110.5 | 2398930 | 10.5 | 25188765 |
| 2009-10 | 100 | 133.17 | 2398930 | 33.17 | 79572508 |
| 2010-11 | 100 | 140.38 | 2398930 | 40.38 | 96868793 |
| 2011-12 | 100 | 146.63 | 2398930 | 46.63 | 111862105 |
| 2012-13 | 100 | 146.63 | 2398930 | 46.63 | 111862105 |
| **Total** | | | | | **42,53,54,276** |

Source:-Rate for the demurrage charges fixed by Railway Board and earning capacity of wagon as given in Annual statistical statement of respective years

MoR replied (September 2014) that to control the detentions to wagons, demurrage charges are levied on the party responsible for such detentions. Further, at terminals which perform poorly on regular basis punitive demurrage is also levied. Fact, however, remains that 25 per cent of the demurrage charges were waived during the period under review. Chapter I of Report No.8 of 2010-11 also highlighted that, demurrage leviable on the private parties for detention of rolling stock in terminals beyond the allowed free time for loading/unloading operations, were routinely waived across zones.

## 3.7 Recovery of accident damage and deficiency charges

The cost of accident damages caused to wagons inside the siding premises are to be preferred on/ realized from the siding owners. A review of records for the period 2008-13 maintained across all Zonal Railways revealed that 688729 wagons were involved in accidents/damages in the siding. Bills for ₹.41.17 crore on account of damage and deficiency charges for these were raised against siding owners, out of which only ₹.21.18 crore (51.45 per cent) was recovered till 31st March 2013 and the bills for ₹.1.32 crore preferred by CR was disputed by the parties. In NWR, bills for ₹.0.54 crore for the period from 2010-11 to 2012-13 are yet to be preferred by the respective Divisions. Cost of damage to 226 wagons on NWR (183 in 2010-11 & 43 in 2011-12) is yet to be assessed and recovered. (Annnexure 6)

It was observed on SWR that extant instructions to stop mechanized loading using pay loaders and JCBs were not followed by M/s JSWT, a private siding owner in SWR which accounted for damage to 1601 wagons out of total number of 2210 wagons suffering damages on SWR during the period under report. Damages continued to occur at the siding. No effective measures were taken by the administration on this issue.

## 3.8 Defects in newly built/supplied wagons

Para 15 of General Conditions of Contract (GCC) enclosed with the contracts placed on the wagon manufacturers stipulates that in case the wagon supplied are found defective within the warranty period of 30 months from the date of delivery or 24 months from the date of commissioning, whichever is earlier, the same will be rectified by the Railways, if not attended by manufacturer, and cost of such repairs to be recovered from the supplier. Rectifications/repairs if carried out by Railways will result in loss of wagon days and consequential loss of earning.

Audit scrutiny of the newly built wagons during 2008-09 to 2012-13 revealed that wagons were found defective during warranty period; Railways incurred expenditure on repair of such wagons and sustained loss of wagon days and consequential loss of earning capacity of wagons.

It was observed that in 10[30] Zonal Railways, 4289 newly manufactured wagons became defective during warranty period. Of these, 273 wagons (NR-6, SECR-120 and SER-147) were repaired by the Railways. An amount of ₹ 0.51 crore was spent by Railways in getting these wagons repaired. An amount of ₹ 0.25 crore is yet to be realised from the wagon builders.

Further, these 4248 wagons found defective with in the warranty period had to be withdrawn from service for necessary repairs resulting in loss of 16,815 wagon days and consequential loss of wagon earning capacity amounting to ₹.3.47 crore.

## 3.9 Miscellaneous Audit findings

As per agreement executed by Haldia Dock Complex (HDC) siding and SER, the higher of the amount of Wagon Hire Charges and demurrage charges collected by HDC was payable by HDC to Railways. However, Railway decided to change the method of calculation of wagon hire charges and also shift the interchange point without incorporating necessary changes in the agreement. HDC did not accept the revised bills and ₹ 49.73 crore remains unrealized till March 2013 due to the dispute.

The goods sheds/sidings were found deficient in basic facilities for loading/unloading affecting timely receipt and dispatch of goods trains consequently leading to abnormal detentions of rolling stock. The average detention was more than 24 hours in respect of 32 per cent of the wagons dealt with at selected loading and unloading points during the period 2008-13. Further, the rakes after having been released/dispatched from goods sheds/sidings suffered detentions in terminal yards which averaged up to 15 hours. This coupled with detentions of rakes at enroute stations subsequently on account of stabling due to non availability of path, crew changing etc was bottleneck in efficient operations of goods trains.

Deterioration in the various efficiency parameters was hindrance in smooth and efficient freight train operations. IR was not able to keep the train parting, wagon detachment and spring breakage cases with in the targets which had a cascading effect on the goods train operation. Regarding average speed of the goods trains, audit observed that in more than 50 per cent of the trains the average speed was below 20 kmph. It was observed that more than 50 per cent of the trains started late due to non availability of locomotives. Further, concern of IR for the safety not visible as the Goods Trains travelled more than the distance authorized under BPC in about 37 per cent of the trains test checked which was a clear case of compromise with safe running of the trains.

Demurrage charges to the extent of 25 per cent (₹ 267.07 crore) were waived during the period under review. Out of ₹ 789.89 crore accrued as demurrage charges, an amount of ₹ 53.06 crore still remains to be recovered by IR.

[30] ER, ECR,SR, SER,SECR, NR,WR, WCR,SWR,CR