Chapter 4 – Mechanical – Zonal Hqrs/Workshops/ Production units

The Mechanical Department is mainly responsible for management of –

- **Train operations by** ensuring Motive Power availability, Crew Management, Rolling Stock Management and Traffic restoration in case of accidents
- **Production Units** engaged in production of Locomotives, Coaches, Wheel sets, etc
- **Workshops** set up for **r**epair, maintenance and manufacturing of rolling stock and related components

The Mechanical Department is headed by Member (Mechanical) at Railway Board. In each of the zones the Department is headed by a Chief Mechanical Engineer who reports to the General Manager of the Railway. The office of the Member (Mechanical) of the Railway Board guides the CME on technical matters and policy. At the divisional level, Sr. Divisional Mechanical Engineers are responsible for implementation of the policies framed by Railway Board and Zonal Railways.

Production Units are managed independently by General Managers reporting to the Railway Board. The Workshops are headed by Chief Works Managers and report to the CME.

Central Organization for Modernization of Workshops (COFMOW) under the Mechanical Department is a centralized agency of the Indian Railways responsible for modernization of Railway Workshops and Production Units and carries out procurement and induction of modern workshop technologies and specialized Machines & Plant (M&P).

The total expenditure of the Mechanical Department during the year 2010-11 was ₹22614.98 crore. During the year, apart from regular audit of vouchers and tenders etc., 585 offices of Mechanical Department were inspected.

This chapter includes a study on planning, procurement, installation and commissioning of Machinery and Plants (M&P) through Central Organisation for Modernization of Workshops. Besides, the following instances of serious irregularities in procurement and maintenance operations have been highlighted.

- Inadequate assessment of reasonableness of tender rates and lack of decision within the validity of offer period
- Tendering of steel at prices other than ex-works SAIL, used as benchmark by Railway units in cost estimates.
- Stabling of rolling stock for long periods
- Splitting up of tendered quantity of steel items at higher rates

4.1 Plant and Machinery Procured by COFMOW

Executive Summary

Central Organization for Modernization of Workshops (COFMOW) was established in 1978 as a centralized agency for modernization of Railway Workshops and Production Units for induction of modern technologies and Machines & Plant (M&P) based on the present day needs.

Audit in their earlier reports had brought out instances of pre-procurement and post procurement delays, non-utilization and underutilization of costly machinery and plants and Railway Board had stated that continuous efforts were being made to bring about improvements and shorten the procurement cycle.

This study was, therefore, undertaken to ascertain pre-and post-procurement performance of COFMOW vis-à-vis Zonal Railways in respect of selected Machinery and Plant (M&P) items procured during the period from 2008-09 to 2010-11. The study revealed delay up to a maximum of 25 months in installation and commissioning of M&P costing ₹ 99.87 crore besides significant delays at each stage i.e. submission of indents by Zonal Railways to COMOW, finalization of specifications, calling and finalization of tenders etc. reflecting weak planning and coordination among user agencies and the service organization. There were 37 cases of underutilization of procured M&P costing ₹131.15 crore on account of non-availability of work load raising serious concerns on the justification for their procurement. In a few cases, the machines procured were either not compatible with the actual demands or there was virtually no requirement and thus had to be transferred to other units. In some cases, defects were noticed at the time of installation and commissioning and Railway Administration had not taken necessary action against the suppliers to meet their warranty obligation.

4.1.1 Introduction

Central Organization for Modernization of Workshops (COFMOW) headquartered in New Delhi, is a designated centralized agency of the Indian Railways responsible for modernization of Railway Workshops and Production Units and carries out procurement and induction of modern workshop technologies and specialized Machines & Plant (M&P). The focal area of responsibilities of COFMOW in procurement broadly covers the following:

- Selection of manufacturing technologies and M&P;
- Preparation of detailed technical specifications for M&P procurement;
- Consultancy for on-site commissioning;
- Coordination of warranty services with manufacturers;
- Support of rolling stock – Transfer of Technology (TOT) projects like LHB coaches, GM diesel locomotives and ABB locomotives by purchasing special purpose M&P; etc.

All new and replacement plant and machinery are sanctioned by the Railway Board in the Annual Machinery and Plant (M&P) Programme. On the basis of sanctioned and vetted indents received from various Zonal Railways and Production Units, COFMOW prepares specifications and places orders for their procurement after acquiring the approval of consignees. Inspection of M&P procured by COFMOW is normally done by RITES.

4.1.2 Organizational Structure

The Chief Administrative Officer (CAO) having overall charge of COFMOW reports to the Member (Mechanical) in the Railway Board. The CAO is assisted by three Chief Mechanical Engineers (CMEs), one Chief Electrical Engineer, two Controller of Stores (COS), two Financial Advisors & Chief Accounts Officers (FA&CAOs) and supporting staff.

Technical evaluations of proposals are carried out by CME/Dy. CMEs and CEE/Dy. CEE for their respective departments while commercial evaluation is prepared by the Stores department and vetted by finance department. The CME/Post Contract Management (PCM) is responsible for co-coordinating with consignees and supplier firms to ensure timely supply, installation, commissioning and performance of machines.

4.1.3 Audit objective

The budget for procurement of plant and machinery is allocated to various Zonal Railways under Capital Grant No. 16 of the Ministry of Railways' Demands for Grants and comprises on an average, 0.50-0.60 per cent of the total capital budget (Plan + non-Plan) of the Ministry. The expenses incurred by COFMOW as a service organization for execution of centralized procurement are allocated to Zones. The total budget estimates during 2008-09 to 2010-11 were of the order of ₹ 1274 crore against which actual utilization of funds was only ₹ 945.25 crore (74 per cent on an average). (Table below)

Year	Budget Classification	Budget Estimate	Revised Estimate	Actual Expenditure	Percentage utilization against Budget Estimates	Percentage utilization against Revised Estimates
		Figures ₹ in crore				
2008-09	M&P	367.48	262.62	225.41	61	86
2009-10	M&P	400.63	395.20	352.23	88	89
2010-11	M&P	506.23	420.27	367.60	73	87

There were recurrent savings even with reference to revised reduced budget estimates in each of these years. These savings were attributed by the Ministry to less procurement under M&P items and delayed supply of equipment analysis.

Audit had raised in earlier Audit Reports the issue of delays and deficiencies in procurement and delays in commissioning of equipment in specific instances. These cases were also linked with underutilization of costly equipment procured. It was seen that in one of the actions taken note the

Ministry had claimed that measures had been taken to shorten procurement cycle.

It was, thus, decided to conduct a thematic study on entire procurement process from planning to commissioning to evaluate-

- Efficiency in co-ordination in planning
- Efficiency in tender management
- Efficiency in post delivery including quality assurance

For this purpose, it was decided to focus on specific group of machinery having regard to their significance in terms of money value.

4.1.4 Audit Scope and Selection Methodology

The thematic study was focused on pre- and post-procurement stages and COFMOW's performance reviewed on the parameters as shown in the following diagram:

This study covered the period from 2008-09 to 2010-11, incorporating only such M&P for which orders were placed by COFMOW in these three years. Relevant data and supporting documentation of the Stores, Mechanical and Integrated Finance departments of COFMOW, all Zonal Railways and Production Units of Indian Railways available in COFMOW were studied. Out of 2023 machines valued at ₹1378 crore procured by COFMOW in the last three years, a sample of 124 machines valued at ₹550.42 crore were selected for pre-procurement and 155 machines selected for post-procurement review.

Since the bulk of M&P procured by COFMOW falls into following four categories, all the M&P falling in the price range indicated against each procured during 2008-09 to 2010-11 were taken up for review:

Category of Machines	Cost (₹in crore)
Milling	0.80 - 3
Boring	0.80 - 3
Paint Booth	1 - 12
CNC/Lathe	2 - 6

4.1.5 Audit findings

4.1.5.1 Pre-Procurement Process

Zonal Railways and Production Units submit indents for procurement of machines to COFMOW. Such indents fall in two main categories as follows:

- Replacement of obsolescent/obsolete machines for existing production line(s).
- New machines for new production line(s).

Zonal Railways and Production Units are required by the Railway Board to submit their respective indents to COFMOW for procurement action latest by 15th June of every year. Thereafter, COFMOW prepares specifications and initiates tendering if required, awards contracts etc. The time limit prescribed by the Board from receipt of indent to issue of letter of acceptance (LOA) is detailed below:

- Category I: Open tender without new/modified specifications=> 208 days
- Category II: Open tender with new/modified specifications=> 388 days
- Category III: Global tender without new/modified specifications => 223 days
- Category IV: Global tender with new/modified specifications => 403 days
- Category V: 2-packet tender without new/modified specifications => 413 days
- Category VI: 2-packet tender with new/modified specifications => 593 days

(i) Delayed submission of indents by indenting units to COFMOW

Timely submission of indents by the Zonal units is essential to successful planning of procurement. However, it was observed that 85 of 124 indents reviewed were belatedly indented by indenting agencies (Zonal Railways and Production Units). Delays in indenting were observed in 54 cases (64 per cent) extending up to six months, in 18 cases (21 per cent) ranging from six to 12 months and in 11 cases (13 per cent) ranging from 12 to 24 months. Two cases were also noticed where indenting delays were more than two years. No

delays were noticed in eight cases. The delay in indenting consequently affected finalization of specifications of machines and inviting of tenders.

Indenting Unit	Machine Units	Minimum Delay	Maximum Delay
		In Days	
NR	9	31	248
CR	8	26	332
ICF	1	0	33
WCR	3	38	72
NWR	1	0	39
DMW	4	44	194
SR	8	45	209
SCR	9	49	234
RWF	5	49	789
RCF	1	0	851
NCR	4	56	370
NER	5	71	606
DLW	1	0	70
ER	12	77	518
NFR	3	0	99
WR	2	0	256
ECR	2	84	523
E Coast	1	0	172
SECR	4	121	193
SER	1	0	39
SWR	5	234	377
TOTAL	**85**	**930**	**6224**

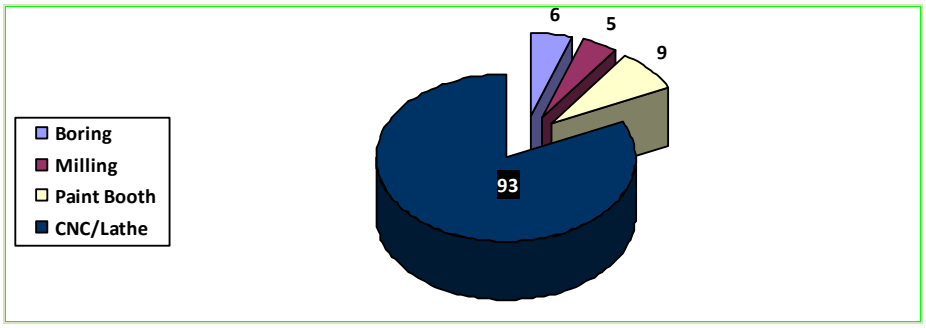
From the above table, RWF, RCF, NER, ECR and ER emerged as the worst performers with maximum time delay.

In excess of six months delay in 38 cases (31 per cent) of the cases test checked, no reasons for delay in submission of indents were made available to audit. In the circumstances, it was unclear whether these indents were actually need-based or otherwise.

(ii) Delay in finalizing specifications by COFMOW

COFMOW draws up standard specifications for M&P procured by them on behalf of indenting units. COFMOW is responsible for keeping abreast with commercially available technology and updating their technical databases pertaining to inventory of various machines procured from time to time. COFMOW has prescribed minimum time of three days for submission of specifications (not requiring modifications) and a period of 183 days for those requiring modifications. Despite its assigned responsibilities, COFMOW had taken more than 183 days in 14 cases to finalize the specifications. Moreover, in eight cases, time taken to finalize specifications was more than one year and extended up to two years. No delays were noticed in 22 cases.

Category of M&P	Minimum Delay	Maximum Delay
	In Days	
Boring	3	179
Milling	3	147
Paint Booth	3	336
CNC/Lathe	3	302



In terms of units of the above M&P, CNC/Lathe accounted for the largest share of M&P in the indenting agency, which were delayed the most by COFMOW.

No reasons were made available to audit to explain the abnormal delays in compliance with the norms prescribed.

(iii) Delays in calling of tenders by COFMOW

After finalization of specifications, tenders shall be called within a period of 20 days.

Out of 124 M&P cases reviewed, delays in 35 cases (28 per cent) were observed in calling for tenders. These exceeded three months in 16 cases. Moreover, in eight cases, tenders were not called even after a lapse of one year. In a particular case of CNC Grinder Cylindrical machine, COFMOW had taken about three years and six months to call the tender.

These delays had mainly occurred at the time of forwarding the demands to the Stores Department of COFMOW for further necessary action. Reasons for the delays were not on record.

(iv) Delay in acceptance of tenders and placement of Purchase Orders

As per norms prescribed, the process of placement of orders from receipt of indents in COFMOW shall be completed over a time range of approx. six months to 20 months. However, delays in placement of Purchase Orders (POs) in 81 cases costing ₹358.94 crore (of total 124 reviewed M&P) were noticed. Delays were observed in 37 cases (46 per cent) ranging from one to six months, in 19 cases (23 per cent) ranging from six to 12 months and in 14 cases (17 per cent) ranging from 12 to 24 months. Moreover, 11 cases were also noticed where COFMOW had taken more than two years to place the

Purchase Orders (POs). No delays were noticed in 41 cases. Some examples of excessive delays are discussed in succeeding paragraphs.

CNC Gear Hobbing Machine

A CNC Gear Hobbing Machine was indented by DMW/PTA in April, 2008 with estimated annual earnings/savings of ₹4.72 crore per annum. COFMOW finalized the global tender and issued Letter of Acceptance (LOA) in March 2010, i.e. after about two years against the allowed time of 223 days. Despite lapse of over three years after placing the indent, the machine was yet to be received in DMW/PTA depriving DMW of its expected earnings/savings of ₹4.72 crore per annum (Aug 2011).

Spray Paint Booth

In another case of procurement of Spray Paint Booth and Baking oven indented by SWR, the total estimated cost of ₹4.12 crore at the stage of indenting (April 2009) escalated to ₹6.46 crore at the stage of placement of PO (December 2010). Railway had to thus bear extra burden of ₹2.34 crore. The delay in placement of PO was on account of obtaining revised sanction of enhanced funds from indenting units.

(v) Letter of Acceptance (LOA) held up for want of sanction of funds

In some cases, funds allotted for M&P programme for procurement of machinery fell short of actual market price. In case, the sanctioning limit was beyond the power of CAO, COFMOW, cases were returned to indenting units for obtaining the sanction of Railway Board. Audit observed that in 11 cases valuing ₹ 7.04 crore, finalized by the Tender Committee (TC), LOA was not issued for want of revised sanction and additional funds from the indenting units. These delays exceeded one to six months in three cases, six to twelve months in another two cases and more than one year in six cases. These delays in turn were carried forward to commissioning of M&P with cost escalation.

Study of procurement of M&P items revealed that there was lack of coordination among the user departments and the COFMOW from the stage of sending indents to the receipt of machines. While COFMOW had taken its own time for finalization of specifications, calling and finalization of tenders, in most of the cases the indenting departments were not equipped with adequate funds that further delayed placement of orders on suppliers and increase in cost.

The above finding on the pre procurement process revealed inadequate coordination between user departments and COFMOW at every stage from submission of indents to finalization of tenders.

4.1.5.2 Post-Procurement of M&P

For the post-procurement evaluation, 155 cases of procurement of M&P were test checked by audit to assess time taken in delivery, commissioning/ installation, its actual performance and follow up of warranty claims. Rules prescribe that in case of delayed delivery, liquidated damages at the rate of

two per cent of the total contract value would be levied for each month. If stores are rejected by consignee, the supplier is required to replace the same within 21 days or fresh purchase authorized at the risk and cost of the existing contractor.

(i) Delay in supply of Plant and Machinery

Audit noticed that out of 155 M&P, 61 M&P (40 per cent) costing ₹ 212.04 crore were supplied after unreasonable extension of original delivery period with a maximum of 35 months. Of these, in 25 cases delay was for more than six months. The reasons for delay in supply were attributable to suppliers as well as Railways as detailed below:

- In 40 cases, the delay was on the part of suppliers. Out of these, in six cases the suppliers had not made available the drawings on time for approval of the Railway. In one case, the supplier had failed to assemble the machine on time. In the remaining cases, the detailed reasons were not made available.
- In eleven cases the delay was attributable to internal factors such as excessive time taken for approval of GA drawings, non completion of concrete foundation beds, late inspection, unprepared site etc.
- In ten cases, the reasons for delay could not be ascertained as complete information was not on record.

Some cases where the drawings were approved by Railways after abnormal delay are given in Table below.

Type of machine	Consignee	Cost of the machines (₹ in crore)	Period of delay	Reasons of delay
Horizontal Boring and Milling	ICF	1.13	15 months	Faulty foundation drawings
Automatic CNC Under Floor Wheel Lathe	WCR	4.69	14 months	Delay by supplier
CNC Vertical Turret Lathe	DLW	2.69	35 months	Delay in approval of GA drawing and provision of clear site
CNC Camshaft Grinding Machine	DMW	9.06	10 months	Delay by supplier
CNC Vertical Turning and Boring Machine	RWF	3.63	22 months	Delay in approval of GA drawings

(ii) Failures in Installation & Commissioning

The ultimate success of procurement of M&P depends on its satisfactory installation and commissioning within the prescribed/contracted time limits. A time-limit of three to four months has been set as the norm. Delays in commissioning of valuable machinery adversely impact the operational efficiency of Railways. Audit scrutiny of 155 cases of procurement of M&P

items revealed that in 82 cases (53 per cent) there was delay in installation or commissioning as discussed below:

- Out of 82 cases, 66 M&P items were installed till August 2011. Out of these 30 machines costing ₹99.87 crore were installed with time delay up to 25 months. While the delays in 19 cases were attributable to indenting agencies as excessive time was taken in approval of GA drawings, creation of supporting infrastructure like sheds, foundations and provision of power supply, etc., in three cases installation delay was owed to suppliers. In other eight cases, clear reasons were not made available to Audit. In three cases, delay in installation was more than 12 months. Moreover, in a case of CNC under floor wheel lather machine received by NER, machine was installed with a delay of 25 months.
- 18 M&P costing ₹46.34 crore were either not installed or the information of their installation was not on records.
- Out the 68 M&P installed, 45 cases of M&P costing ₹140.58 crore were yet to be commissioned. In 18 cases, commissioning of M&P took more than one month and extended up to 26 months. Such delays carry with it concomitant substantial dividend liability without any return on investment.

It was also observed that in the under mentioned cases, the installation/commissioning had not yet been done (August 2011) despite lapse of more than one and half year to four years after their receipt as illustrated below:

Instances of Machines received long back but yet to be installed/commissioned

Type of machine	Consignee	Cost of the machines (₹ in crore)	Date of receipt of M&P	Reasons of delay
Baking Oven	RCF	0.97	February 2007	Site of installation was not made available
CNC Axle Turning Lathe	CR	5.15	December 2009	Installed in March 2010, but has yet not been commissioned owing to certain manufacturing defects. However no action has been taken till date
CNC Vertical Turret Lathe	DMW	3.26	January 2010	Reasons not defined
Vertical Turret Lathe (four machines)	CR(two) ECR(two)	2.06 1.78	Nov' 08 & Dec'08 March '09 & June'10	In CR, in one machine firm has not responded for commissioning while in other machine, due to technical defects commissioning is held up. In ECR, reasons were not defined.
CNC Vertical Turning Lathe	NFR	2.25	April 2010	Failure to complete pre-requisite foundation work.

(**Annexure LI**)

4.1.5.3 Discharge of Warranty Obligations by Suppliers and Defective M&P

COFMOW's standard conditions of contract stipulate that all replacement and repairs of new M&P should be delivered or performed by the supplier within two weeks of the call by the consignee. Further, warranty period shall be

extended by the number of days if the machine remains broken down. However, Audit observed that in 76 cases defects were noticed at the stage of commissioning of machines or immediately thereafter. In three cases, (Table below) the supplier had neither attended to its warranty obligations nor COFMOW taken adequate measures to hold the suppliers responsible for failure of such M&P.

Railway/ Units	Name of Plant and Machinery	Date of commissioning/ issue of PTC	Date on which defects noticed	Date on which defects brought to notice of supplier	Remarks
CLW	CNC Turning Lathe MT/1802	10.05.2010/ 06.07.2010	18.08.2010	26.08.2010	Supplier had not rectified. COFMOW has been informed (17.02.2011) not place orders on the firm.
CLW	Opt. Gas Profile Cutting M/c MT/1814	12.01.2009/ 16.06.2009	17.04.2009	18.04.2009	Supplier had not rectified. Proposal was sent to COFMOW to realize the cost of the machine from the supplier as the machined should be treated as rejected.
RCF	CNC Plasma Profile cutting machine (Portal type)	22.08.2009	22.01.2010 to 20.04.2011	22.01.2010 to 20.04.2011	No action taken by supplier and COFMOW

Lapses on the part of Railway Administration to take action against the supplier for non-fulfillment of warranty obligation in selected cases are discussed in succeeding paragraphs.

Under Floor Wheel Lathe

An Under Floor Wheel Lathe for Basin Bridge workshop (SR) costing ₹1.94 crore received in September 2006 was installed and commissioned in June 2010 after almost four years. Dy. CME (Planning) had stated in January 2010 that the firm had failed to send its team for completion of erection and commissioning. By this time the wheel lathe had ceased to work (September 2010) on account of development of major mechanical and electrical faults. No action was taken against the supplier for default.

A similar case was also noticed where the lathe machine costing ₹1.94 crore, received by ELS, Ghaziabad (NR) in July 2006 was commissioned in March, 2008. But the lathe had developed mechanical and electrical faults and had to be rejected (January 2011) owing to frequent breakdowns and low out-turn. Though, COFMOW had raised (April 2011) a demand notice for recovery of ₹1.46 crore on the supplier, only an amount of ₹0.30 crore could be recovered. COFMOW was yet to blacklist this supplier.

(i) Difference between advertized and received M&P

It was noticed that a CNC Gear Shaping Machine received (October 2009) by DLW was not as per the requirement and indent sent by DLW. Despite its non-compatibility with demand, the same was installed in January 2010. It was also noticed that an amount of ₹1.23 crore had already been paid to the supplier as 80 per cent advance payment against receipt of stores. Inspection of this machine was carried out by RITES on behalf of COFMOW. COFMOW had neither fixed any responsibility for accepting a machine other than that required, nor approached the RITES to clarify how the machine was passed during inspection. This case is illustrative of a procurement failure that was neither corrected during the inspection nor after receipt.

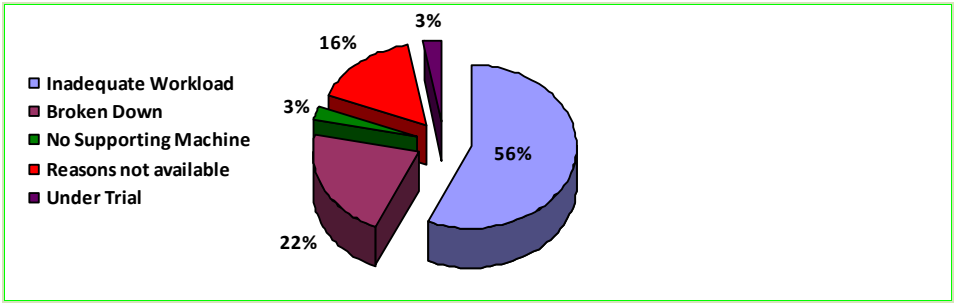
The above analysis of post procurement performance has brought out weak coordination between user departments and COFMOW on planning of procurement and ensuring timely installation and commissioning of machines. This has also contributed to ineffective actions against suppliers found deficient in performance.

4.1.5.4 Utilization of Commissioned M&P

While initiating procurement of M&P, the production requirement and capacity of the M&P (that would satisfy the requirement) are generally considered. However, it was observed that 37 machines costing ₹131.15 crore were working below their rated capacity. Summarized detail of underutilized cases of M&P is as under:

Performance in range of (percentage)						
	NA	**0-25%**	**26-50%**	**51-75%**	**Above 75%**	**Total**
Number of Machines	3	12	9	8	5	37
Cost (₹ in crore)	9.78	34.42	40.51	29.52	16.92	131.15

Further, audit noticed that in eight cases, M&P remained in broken down condition. In one case, M&P was under trial whereas in six cases, reasons for under utilization were not made available to Audit by the operating/indenting agency. The pie diagram below illustrates the break-up of reasons for underutilization.(Figure below)



The above indicated that 56 per cent of the under utilized machines (out of which 10 machines were worth over ₹5 crore) were on account of inadequate availability of workload that ought to have been factored into justification for this requirement. Table below highlights some individual cases where M&P were working far below their rated capacity. **(Annexure XLII)**

Type of machine	Consignee	Cost of the machines (₹ in crore)	Prescribed rated capacity	Actual output	Percentage of utilization
CNC Surface Wheel Lathe	SR	5.38	24 wheel sets in an 8-hour work shift	10 wheel sets per shift	42.00
AJTB Lathe	WR	1.11	500 wheel assemblies per mensem	Four wheel sets per mensem	1.00
CNC Axle Turning Lathes	NR	1.20	8 axles per 8-hour shift	183 axles from April 2009 to May 2011 against its capacity of 5058 axles	4.00
	NR	1.20	112 axles per mensem	36 axles	32.00
CNC Surface Wheel Lathe	NR	7.70	24 wheel sets per 8-hour shift	272 instead of 953 wheel sets from October 2010 to May 2011	29.00

4.1.5.5 Transfer of M&P

Audit also observed that in some cases, M&P received by indenting agencies were not required after its receipt and had been transferred to other zones where too, the M&P were though received, but not installed/commissioned. Some illustrative cases are detailed in the succeeding paragraphs.

- A Coach Washing Plant costing ₹3.16 crore initially procured (January 2007) for Basin Bridge workshop (SR) was not commissioned as the site was not made available by SR. Thereafter COFMOW shifted the plant to Anand Vihar (NR) with approval of Railway Board. But this site was also not found suitable and the M&P was again shifted to Ghorpuri, Pune, (CR) on receipt of indent from the latter in June, 2010 i.e. more than three years from the date of receipt of this M&P. However, the M&P had yet not been commissioned (August 2011).
- Dynamic Balancing machine costing ₹0.07 crore received (November 2009) at Vadodara Electric Loco Shed (ELS), was not commissioned. Thereafter, this M&P was transferred to ELS, Valsad (WR) in August, 2010 where it lay, without being commissioned, till August, 2010 when it was again transferred to Dahod Workshop (WR). This M&P had yet to be commissioned (August 2011) at its latest location.
- A Grit Blasting machine procured at a cost of ₹1.18 crore for ICF, Perambur received in March, 2010, was lying uninstalled to date. ICF had replied stating that this M&P was not required "in the present scenario of products and processes."

The above cases clearly indicated inadequacies in planning for procurement leading to availability of machinery and their transfer for finding a user.

4.1.6 Conclusion

COFMOW was set up as a service organization dedicated to induct updated technology in Indian Railways through bulk procurement of specialized plant and machinery. This objective has not been effectively fulfilled due to lack of adequate monitoring by COFMOW from end to end. Analysis of the performance of pre and post-procurement process revealed weak planning and co-ordination right from the stage of formulating indent up to the commissioning of M&P. Though Railway Board on an earlier occasion had stated that action was being taken to curtail the pre and post-procurement delays, Audit found little improvement. In a significant number of cases there were delays in submission of indents, developing specifications, finalization of tenders and delays in installation and commissioning. The underutilization of M&P procured and their subsequent transfer from zone to zone reinforced the conclusion/ argument that much of the justification for procurement was flawed and, therefore, of doubtful validity. Moreover, COFMOW was found lacking in proper up-dation of database regarding latest technology available in the market.

Recommendations

- *In order to cut pre-procurement delays, COFMOW needs to develop a robust and updated data base regarding changes in technologies and sources of availability of Machinery and Plants across major markets within the country and abroad.*
- *COFMOW/Railway Board needs to ensure that the indenting agencies had supported the requirements for M&P with proper justification and should streamline the post procurement monitoring mechanism for timely installation and commissioning. Besides, indenting agencies may be made accountable in case of lapses in respect of idling of machines received by them.*
- *COFMOW should initiate timely action in cases of defective supply and failure to meet the warranty obligations by the supplier through active monitoring.*

The matter was brought to the notice of Railway Board (December 2011); their reply had not been received (January 2012).

4.2 Railway Board: Loss in procurement of steel materials

Failure of the Ministry of Railways in finalization of tender within the validity of the offer and also failure in proper assessment of the reasonableness of quoted rates resulted in avoidable extra expenditure to the tune of ₹52.94 crore towards procurement of steel at higher rates in the subsequent contract. Besides, special dispensation granted to zone for local procurement of steel also resulted in avoidable loss of ₹4.97 crore

A. Loss due to delay in finalization of tender

In March 2009, Ministry of Railways opened a tender (IS-167 of 2009) for procurement of mild steel, corrosion resistant plates and sheets for meeting the requirement of Zonal Railways, Production Units and wagon fabrication. As per the tender notice, response was solicited from established, reliable, indigenous producers of steel having integrated steel plants or sources especially approved by RDSO. Stores were required against running contract during the period September 2009 to August 2010. Tender was floated for 59138 MT of Corrosion Resistant Steel Sheets and Plates and 136954 MT of mild steel sheets and plates.

Seven firms responded to the tender. The comparative position of the Last Purchase Rates (LPR) of 2008-09 (IS-164 of 2008) vis-à-vis the lowest rates obtained in the present tender (IS-167) revealed average decrease in rates of about 23.53 per cent for mild steel sheets/plates and 23.49 per cent for corten steel sheets/plates due to reduction in wholesale price index for iron and steel.

Out of 44 items of steel sheets/plates of different specification tendered for, M/s Essar stood lowest in 35 items. M/s Essar were eligible for bulk order for all other items except cold rolled sheets and a few items of higher thickness and width. In respect of 13 items, since the percentage of reduction (14.26 - 18.12 per cent) of quoted rates as against the LPR was less than the bench mark of 18.12 per cent reduction, TC recommended for negotiation of rates for those 13 items and the same was approved (July 2009) by the Board. During negotiation, while both the firms declined to reduce their rates, M/s Essar expressed their inability to extend the validity of offer beyond 24 August 2009. Accordingly, the recommendations of TC were put up to the Minister for Railways (MOR) on 13 August 2009. Before getting approval of the MOR, the validity of offer of M/s Essar expired. MOR, therefore, advised Board to review their recommendations.

In view of the above situation, TC reviewed their recommendations and considered following two options:

I. Calling of fresh tender in respect of those items where M/s Essar was L1 and was eligible for regular order.

II. Re-allocating the share of M/s Essar on single tender basis to the next available offer suitable for bulk orders

Apprehending that retendering might fetch higher rates, TC recommended for Option II i.e. reallocation of share of M/s Essar on single tender basis. MOR, however, did not agree to the recommendation of the Board and approved (November 2009) Option I i.e. calling of fresh tender in respect of those items where M/s Essar was L1 and was eligible for regular order and procurement of balance quantity from the remaining firms with the quantity distribution as recommended by the Board. Accordingly, contract was executed (December 2009) with M/s SAIL, M/s TATA Steel and M/s Jindal Steel & Power Ltd. for supply of mild/corrosion resistant steel sheets /plates.

As per CVC guidelines (March 2007) on tendering process, there should be no post tender negotiation with L1 except in certain exceptional situations which would include procurement of propriety items, items with limited sources of supply and items where there is suspicion of cartel formation. In the instant tender, although there was reduction of rates in the range of 14.11 per cent to 40.29 per cent as compared to the Last Purchase Rates (LPR) of 2008-09 (IS-164), TC considered 18.12 per cent (reduction in wholesale price index for iron and steel) as the reasonable expected reduction. However, opting for negotiation to achieve insignificant reduction in rates caused time loss that led to expiry of validity of lowest rate of M/s Essar Ltd. The same stores were subsequently procured at higher rates in next year's contract against Tender No. IS-170 of 2010.

Ministry of Railways was unable to avail of the lowest rates offered by M/s Essar due to delay in finalizing the tender within the validity of the offer and failure in proper assessment of trend of domestic steel prices as well as global market trend. This resulted in avoidable extra expenditure to the tune of ₹52.94 crore due to procurement at higher rates in a subsequent contract.

When the matter was taken up (December 2011) with the Railway Board, they stated that had negotiation been successful, there would have been approximate savings of ₹12 crore. They further stated that the failure of negotiation was due to changing market situation in the steel price which Tender Committee could not have been aware of in advance and also there was no option but to retender the left over quantity because of backing out of L1 firm (M/s Essar).

The reply was not acceptable. During negotiation (August 2009) both the firms (M/s Essar and M/s SAIL) expressed their inability to reduce their quoted rates and extend the validity of rates on the ground of upward trend of the prices of steel since the opening of tender in March 2009. Ignorance of the market trend in respect of steel items being procured regularly by the Indian Railways was indicative of inefficiency of Stores Directorate of Railway Board. Further, it was a forced decision to go for retendering for the left over quantity as there was delay in getting approval of the competent authority.

B. ***Loss due to dispensation granted to zone for local procurement of steel***

Ministry of Railways, Railway Board invited tenders (No.IS-173) in June 2010 for procurement of Special Grade Steel items[12] for manufacture of 675 Nos. BLC wagons in Jamalpur workshop of Eastern Railway and 315 Nos. BLC wagons in GOC workshop of Southern Railway. In June 2010 the Chief Material Manager, Southern Railway requested for issue of dispensation to locally procure 1601 MTS of 12 sizes of special grade steel items for manufacturing 315 BLC wagons. The request was not agreed to by the Board as only 20 days were left for opening of the above tender. Subsequently, Southern Railway again requested (July 2010) for dispensation on the ground that another order for manufacture of 600 BLL wagons had been received from CONCOR for which they would be placing an indent shortly and the quantity, for which dispensation was sought for, was planned to be adjusted against steel requirement for the manufacture of those wagons. Railway Board accepted Southern Railway's request and allowed local procurement by reducing equal quantity from the quantity intended to be procured against Railway Board's Tender No. IS-173.

In November 2010, Southern Railway placed indent for 5017.80 MT of steel for the manufacture of 600 BLL wagons in GOC Workshop and requested dispensation for local purchase of at least one third of the indented quantity. Considering the urgency, Railway Board issued dispensation for local purchase of 1671 MT of steel.

Scrutiny in audit revealed the following:

I. The rates at which Southern Railway procured steel were considerably higher than the rates at which orders were placed by the Railway Board against tender no. IS -173 leading to extra expenditure of Rs. 1.80 crore.

II. The Ministry of Railways did not consider the adjustment proposed by the Southern Railway against steel requirement for the manufacture of 600 BLL wagons and reduced the tendered quantity by 1601MT. Had this quantity been procured through tender No.IS-173, dispensation granted subsequently for local procurement of 1671 MT of steel could have been avoided. Failure to give due cognizance to the proposal of the zone resulted in loss of ₹2.48 crore towards procurement of steel at higher rates as compared to the rates obtained in the subsequent Railway Board tender (N0. IS-174).

III. The contract placed against Tender No. IS-173 did not provide for plus 30 per cent option clause. Due to absence of option clause for increasing the contractual quantity by 30 per cent, Ministry of Railways incurred extra expenditure to the tune of ₹0.68 crore towards procurement of steel at cheaper rates.

[12] includes Z-Sections to IS-2062-2006 E410 with Cu (IS:8500 Fe 540 with Cu) and plates to IS-2062-2006 E450 D with Cu (IS:8500 Fe 570 with Cu)

Thus, the injudicious decisions of the Ministry of Railways to issue dispensation to Southern Railway reducing the tendered quantity and non-inclusion of option clause resulted in a loss of ₹4.97 crore excluding of Excise Duty and Sales Tax involved thereon.

The matter was brought to the notice of Railway Board (December 2011); their reply had not been received (January 2012).

4.3 Northeast Frontier: Railway — Avoidable extra expenditure due to acceptance of higher price of steel than prescribed by SAIL

Acceptance of higher price of steel than that actually prevailing in the market as per SAIL's ex-works price resulted in avoidable extra expenditure of ₹19.34 crore

Basic rates for supply of steel contained in tenders for fabrication of super structure of railway bridges are prepared on the basis of prevailing market rate i.e. Ex-works price of steel as obtained from Steel Authority of India (SAIL), excise duties, sales tax, etc. Other incidental charges including profit elements as admissible are added to this rate. These tenders also include a Price Variation Clause (PVC) clause to calculate the escalation/ de-escalation of prices between the ex-works price obtained on the day of opening the tender and that prevailing on the day of actual purchase of the material.

For construction of a bridge super structure on the river Mahananda, a tender was opened on 8 August 2008 by the Construction Organisation of Northeast Frontier Railway. Instead of using ex-works price of ₹49,321 per MT of steel as on 1 August 2008 as obtained from SAIL for procurement of steel, an increased estimated rate of ₹59,112 per MT based on a quotation obtained from a retail seller at Katihar was used. Thereafter, these rates were further increased by 18.2 per cent over and above the estimated quoted rates of the tenderer and the rate of ₹69,870 per MT was accepted by the Railways. It was stated by the Tender Committee (TC) that the estimated rate was based on the rate analysis considering the market rate and there had been a rise of steel prices during the intervening period of last three/ four months. It was further stated that during negotiation the company had submitted the rate of ₹71,499 per MT. In view of this, the TC opined that the negotiated rate of ₹69,870 per MT was reasonable and recommended the same for acceptance.

After acceptance of the unusually higher rate, the Northeast Frontier Railway Administration executed eleven more contracts between 8 August 2008 and 18 June 2010 for a few other projects with 4.4 per cent to 32 per cent per cent over and above the estimated rate of ₹59,112/- per MT. The fixation of estimated rate of steel at a rate above the rate actually prevailing in the market as per SAIL's ex-works price was not acceptable because even the Open Line Organisation of this Zonal Railway was procuring steel materials in accordance with the SAIL's ex-works price prevailing in the market. Thus, the acceptance of higher rates in all the twelve contracts much in excess of the SAIL's prevailing market rates resulted in avoidable extra expenditure of ₹19.34 crore for supply of 9119.913 MT of steel.

When the matter was brought to the notice of Railway Administration (March 2011), they accepted (October 2011) that the estimated rate contained in the Schedule of Works for execution was based on a quotation obtained from a retail seller at Katihar instead of consulting Ex-works price as obtainable from SAIL. However, the work had to be executed at site and workshop and hence prevailing rate in Siliguri stock yard could not be justified for those works to be executed at Mahananda River site. The argument is not acceptable because while working out the rate at Siliguri Stockyard, audit took into account the cost of transportation per M.T. of steel from Siliguri Stockyard to worksite at the rate of ₹650/- per MT, the rate which was adopted by the Railway Administration itself in working out the cost per MT. Further, Railway Board always communicate the SAIL's ex-works price of steel to all the Zonal Railways based on which estimates are to be finalised for inviting tenders for acceptance. Thus, the acceptance of higher rates than the SAIL's prevailing market rates resulted in avoidable extra expenditure of ₹19.34 crore.

The matter was brought to the notice of Railway Board (December 2011); their reply had not been received (January 2012).

4.4 North Western: Loss due to non utilisation of rolling stock Railway

Failure of the Railway Administration to properly plan the movement of its rolling stock resulted in loss of Railways' earning of ₹15.42 crore

The performance of the Railway as a 'Goods Carrier' depends *inter-alia* on optimum utilisation of rolling stock with minimum detention so as to increase its revenue earning capacity. Rolling stock viz. wagons and coaches should be periodically overhauled in the nominated workshops as applicable. Wagons and coaches due for Periodical Overhaul (POH) are handed over by the traffic department to the workshop authorities. After POH the same are handed back to the traffic department. On receipt, the rolling stock is dispatched wherever required for commercial use.

Audit scrutiny of the rolling stock coming for POH at the Ajmer Workshop revealed that abnormal time was taken prior to commencing and after completion of the POH work. During the period 2008-09 to 2010-11 (upto January 2011), as many as 637 wagons were detained for 5180 wagon days. This resulted in loss of earnings of ₹4.52 crore, after allowing a grace of five days. Similarly, 989 coaches were detained for 6270 vehicle days. This also resulted in loss of earnings of ₹10.90 crore, after allowing a grace of five days. Hence, rolling stock was stabled without any use and the Railway Administration failed to effectively utilise the available rolling stock despite scarcity of the same in Indian Railways. Thus, poor management of rolling stock on the part of Railways resulted in loss of earning capacity of ₹15.42 crore.

When the matter was taken up with the Railway Administration in March 2011 and April 2011, the Senior Divisional Operations Manager, Ajmer stated that detention of rolling stock prior and post POH period was purely on account of workshop authorities. Similarly, the workshop authorities viz.

Deputy Chief Mechanical Engineer (carriage and loco)-Ajmer stated that receipt and dispatch of coaches and wagons to and fro workshop was being controlled by the Operating Department and as such the detention to coaches and wagons before and after POH was on account of Operating (Traffic) Department.

The replies of the Operating and Mechanical Department reflected total lack of coordination between the two by trying to shift the onus from one to another. It was noticed that on several occasions, the workshop authorities belatedly intimated the Operating Department regarding withdrawal of rolling stock from the workshop causing avoidable detention after POH. On several occasions, the delay was on the part of the Operating Department as they failed to accept the rolling stock after receipt of information from the workshop authorities. The shunting power engine was regularly available with the workshop and thus, the piece meal offering of wagons and coaches after POH was easily manageable. On the matter being taken up by Audit, the Workshop authorities in May 2011 requested the Traffic Department to accept the rolling stock immediately after a POH to avoid such delays.

Had the Railway Administration properly planned the movement of the rolling stock coming for POH to Ajmer Workshop in close coordination between Operating and Mechanical departments, 89 goods trains comprising 58 BOXN wagons and 348 passenger trains comprising 18 coaches could have been run for the period under report and loss of ₹15.42 crore could have been avoided.

The matter was brought to the notice of Railway Board (October 2011); their reply had not been received (January 2012).

4.5 Railway Board: Improper splitting of tendered quantity

Failure of the Ministry of Railways in negotiating acceptance of the lowest rate before splitting of tendered quantity resulted in avoidable extra expenditure of ₹12.36 crore

In March 2008, Ministry of Railways opened a tender (IS-164) for procurement of mild steel, corrosion resistant plates and sheets for meeting the requirement of Zonal Railways, Production Units and wagon fabrication. As per the tender notice, response was solicited from established, reliable, indigenous producers of steel having integrated steel plants or sources especially approved by RDSO. Stores were required against running contract during the period June 2008 to May 2009. Tender was floated for 172741 MT of mild steel sheets and plates and 66364 MT of Corrosion Resistant Steel Sheets and Plates.

In response to above open tender, six firms quoted their rates. The comparative position of the Last Purchase Rates (LPR) of 2007-08 (IS- 157) vis-à-vis the lowest rates obtained in the present tender (IS-164) revealed that the rates in the present tender were 15 to 65 per cent higher. Average increase in rates was 31.92 per cent for mild steel sheets/plates and 33.61 per cent for corten steel sheets/plates. M/s Tata steel was found to be L1 for all the five items of mild steel sheets/plates quoted by them.

Tender Committee (TC) observed that M/s Tata Steel was eligible for bulk supplies against all the items quoted by them as they were regular bulk supplier of steel items to Railways and their past performance was satisfactory. Despite this, TC recommended splitting up of tendered quantity in favour of M/s SAIL at a rate higher than the L I bid on grounds of poor performance and capacity constraint of L1 tenderer.

Scrutiny of records by Audit revealed that the supply performance of M/s Tata Steel (L1) during the years 2006-07 and 2007-08, was 94.7 per cent and 100.64 per cent respectively. Thus, M/s Tata Steel was eligible for bulk supply order and, therefore, the splitting up of tendered quantity was not based on reasonable grounds. Further, no counter offer was made to M/s SAIL for acceptance of lowest rate quoted by M/s Tata Steel before splitting up of tendered quantity although TC itself accepted that M/s Tata Steel was eligible for bulk order.

Thus, improper assessment of capacity of the tenderer M/s Tata and failure of the Ministry of Railways in negotiating with M/s SAIL for accepting the lowest rate offered by the firm M/s Tata Steel before splitting of tendered quantity resulted in avoidable extra expenditure to the tune of ₹12.36 crore.

When the matter was taken up with Railway Board (October 2011), they stated that in respect of one item, the firm M/s TATA was yet to supply 22 per cent of the total ordered quantity when the recommendation for splitting of tendered quantity was made. For the other two items, they stated that M/s TATA was not found suitable for the full quantity due to length and width restriction quoted by the firm. Railway Board further stated that the question of counter offer to M/s SAIL did not arise either due to reluctance of the firm to reduce their quoted rate or non-availability of lower technically suitable offer.

The reply was not acceptable. Despite annual maintenance shut down, performance of M/s TATA was consistently satisfactory since 2004-05. The option for allotment of quantity at a higher rates to L2 firm M/s SAIL was avoidable had the Ministry of Railways given due consideration to the past performance of M/s TATA. The contention of the Board in support of reduction of quantity due to length and width restriction was not susceptible to verification as there were no documents on record in support thereof.