14

STANDING COMMITTEE ON RAILWAYS

(1997-98)

ELEVENTH LOK SABHA

MINISTRY OF RAILWAYS
(RAILWAY BOARD)

MODERNISATION AND CAPACITY UTILISATION OI WORKSHOPS IN INDIAN RAILWAYS

FOURTEENTH REPORT

LOK SABHA SECRETARIAT
NEW DELHI

October, 1997/Kartika, 1919 (Saka)

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Presented to Lok Sabha on .....

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LOK SABHA SECRETARIAT
NEW DELHI

October, 1997/Kartika, 1919 (Saka)

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CORRIGENDA

TO THE 14TH REPORT OF STANDING COMMITTEE ON RAILWAYS (1997-98) ON 'MODERNISATION AND CAPACITY UTILISATION OF WORKSHOPS IN INDIAN RAILWAYS'

Page	Para	Line	For	Read	
02	03	02	**Heading** 'Set up Activities in the then year'	'Year in which set up' (as Col. 2)	'Activities when set up' (new Col. 2A) (between Col. 2 & 3)
03	At Sl. No. 6 Col. 3		Ng	NG	
09	At Sl. No. 36 Col. 2		Watons	Wagons	
09	At Sl. No. 38 Col. 2		NG & NG Seam	MG & NG Steam	
15	12	02	with	which	
29	28	07	to	do	
43	–	11	Kinchrapara	Kanchrapara	
44	–	21	Charbag	Charbagh	

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4. Shri O.P. Shokeen	—	*Committee Officer*

INTRODUCTION

I, the Chairman of the Standing Committee on Railways (1997-98) having been authorised by the Committee to present the Report on their behalf, present this Fourteenth Report of the Committee on 'Modernisation and Capacity Utilisation of Workshops in Indian Railways'.

2. In order to have detailed examination of the subjects selected by the Standing Committee on Railways (1996-97), six Study Groups were formed. The Study Group IV (Workshops, Undertakings and Production Units) consisting of the following Members examined the above subject at their sittings held on 16 & 31 October 1996 and 13 January 1997 :—

1. Shri S. Bangarappa — *Convenor*
2. Shri K.M. Saifullah — *Alternate Convenor*
3. Shri K. Parasuraman
4. Shri S. Niraikulathan
5. Shri Tribid Choudhury
6. Shri Ashok Gehlot

3. Thereafter, the Standing Committee on Railways (1996-97) decided to take up the subject for further examination. The Committee took evidence of the representatives of the Ministry of Railways at their sittings held on 2 and 25 June, 1997.

4. The Report was considered and adopted by the Standing Committee on Railways (1997-98) at their sitting held on 23 October, 1997.

5. The Committee wish to express their thanks to the representatives of the Ministry of Railways (Railways Board) who appeared before the Committee and shared their considered views on the matters which came up for discussion during evidence. They also wish to thank them for furnishing the material and information desired by the Committee.

NEW DELHI;
23 October, 1997
1 Kartika, 1919 *(Saka)*

BASUDEB ACHARIA,
Chairman,
Standing Committee on Railways.

PART I

REPORT

Introductory

As the main component of the transport infrastructure, Railways have a crucial role to play in the sustained development of the economy. The change in economic philosophy and rapid acceleration in the pace of the nation's economic growth have confronted the Railways with the sternest challenge. The Railways will have to respond to the changing environment by making the necessary competitive adjustments to deal with the pressures of market forces in a liberalised economic environment, not only to remain financially viable but also to be able to satisfy the growth in demand for rail transport as a result of accelerated growth of a vibrant economy. In the circumstances modernisation and upgradation of the rail transport system and proper maintenance of their rolling stock become matters of paramount importance.

2. At present there are 44 maintenance workshops over the Indian Railway system. These workshops are the backbone of the Indian Railways and are responsible for the maintenance of locomotives, carriages and wagons. Periodic overhauling of diesel and electric locos, coaches, wagons and EMUs at specified periodicity is undertaken in these workshops. These workshops are also manufacturing and repairing various components required for rolling stock maintenance in field units.

Background of Workshops

3. The background and basic features of these workshops are shown in the following statement :

Name of Workshop	Set up Activities in the then year	Present Activities	Total	Area Covered	Staff Strength	Machinery & Plant	Monthly Capacity			
1	2	3	4	5	6	7	8			
CENTRAL RAILWAY									**1991**	**1995**
1. Jhansi Workshop	1895	Loco repair.	POH of Wagons.	339425 Sq.Mts.	70225 Sq.Mts.	6400	361	(i) BG Wagons	1670	1670
								(ii) BG Coaches	20	Nil
2. Parel Workshop	1879	BG Steam loco.	(i) POH of Diesel Locos	—	81242 Sq.Mts.	6000	1186	(i) BG Diesel Elec.	9	9
								(ii) BG Diesel Hydraullic	4	4
								(iii) BG Electric Loco (DC)	2	1.5
			(ii) Steam Loco POH stopped in 1989.					(iv) BG Cranes	2	2
3. Matunga Workshop (including Kurla)	1915	Coaches & EMUs.	POH of BG Coaches, EMUs and Tank Wagons.	34.38 hect.	10.1 hect.	9400	1000	(i) BG Coaches (EMUs)	300	325
								(ii) BG EMUs (FWUs)	80	87
								(iii) Tank Wagons (FWUs)	130	150

1	2	3		4	5	6	7	8		
4. Bhusawal Workshop	1974	POH of AC. Locos	POH of electric (A) Locos.	32450 Sq.Mts.	15869 Sq.Mts.	1700	85	Electric Locos	10	9.5
5. Bhopal Workshop	1989	Mid-Life rebuilding of BG coaches.	Mid-life rebuilding of BG Coaches.	22780 Sq.Mts.	—	2000	80	(i) Mid-life rebuilding BG coaches (Veh.)	5	240
6. Kurduwadi Workshop	1931	POH of MG Loco & Coaches.	POH of Ng Steam and Diesel Loco, Coaches and Wagons.	5095 Sq.Mts.	—	600	117	(i) NG Steam Loco	1.2	Nil
								(ii) NG Coach (FWUs)	9	9
								(iii) NG Wagons (FWUs)	12	12
EASTERN RAILWAY										
7. Jamalpur Workshop	1862	POH of Steam & Diesel Locos.	—	570000 Sq.Mts.	254747 Sq.Mts.	11500	1272	(i) BG Steam Loco	9	Nil
								(ii) Diesel Elec.	4	4
								(iii) BG Diesel Hyd.	2	2
								(iv) BG Diesel Cranes	0.5	2
								(v) Steam Cranes	2	Nil
8. Liluah Workshop	1863	POH of BG Coaches & Wagons.	POH of BG Coaches and Wagons.	299953 Sq.Mts.	103195 Sq.Mts.	13000	712	(i) BG Coaches (FWUs)	390	400
								(ii) BG Wagons (FWUs)	1100	1135
9. Kanchrapara Workshop	1863	POH of Elec. Loco & EMU.	POH of IRS Coaches, Electric Loco and EMU.	412700 Sq.Mts.	—	13500	—	(i) BG Coaches (FWUs)	70	70
								(ii) BG Elec. loco	7	8.5
								(iii) BG EMUs (FWUs)	75	116

1	2	3	4	5	6	7	8		
NORTHERN RAILWAY									
10. Charbagh Workshop	1865	POH of Steam & Diesel Locos.	POH of Diesel and Electric Locos.	129472 Sq.Mts.	57952 Sq.Mts.	4000	630	(i) BG Steam Loco	7	Nil
								(ii) BG Diesel Elec. Loco	6	6
								(iii) BG Electric Loco	1	2
11. Alambagh Workshop	1925	Repairing of Coaches & Wagons.	POH of Coaches and Wagons.	230320 Sq.Mts.	63604 Sq.Mts.	5400	478	(i) BG Coaches (FWUs)	190	250
								(ii) BG Wagons (FWUs)	400	Nil
12. Jagadhri Workshop	1952	Repairing of Coaches & Wagons.	POH of Coaches and Wagons.	635687 Sq.Mts.	62095 Sq.Mts.	6500	429	(i) BG Coaches (FWUs)	250	250
								(i) BG Wagons (FWUs)	1060	1060
13. Amritsar Workshop	1901	POH of Steam Locos.	POH of BG Diesel Hydraulic Locos.	40 Acres	13.75 Acres	2900	559	(i) BG Diesel Hyd. locos	15	15
								(ii) BG Wagon manufacture BVZCs 30 units per month 12.5 units per month	1996-97	BOX 'N'
14. Jodhpur Workshop	1886	Repairing of MG Steam locos, Coaches and Wagons.	POH of MG Coaches and wagons, IOH of MG Steam Locos & manufacture of NG Coaches.	115339 Sq.Mts.	48983 Sq.Mts.	2400	446	(i) MG Coaches (FWUs)	70	30
								(ii) MG Wagons (FWUs)	175	—
								(iii) BG Coaches (FWUs)	—	25

1	2	3	4	5	6	7	8	
15. Bikaner Workshop	1925	Repairing of MG Steam locos, Coaches & Wagons.	POH of MG Steam locos, coaches and wagons.	141678 Sq.Mts.	22747 Sq.Mts.	1500	280	(i) MG Steam locos 4 Nil (ii) MG Coaches (FWUs) 50 50 (iii) MG Wagons (FWUs) 50 41
16. Kalka Workshop	1903	Light repairs of NG rolling stock.	POH of NG coaches and wagons.	16000 Sq.Mts.	9000 Sq.Mts.	700	152	(i) NG Coaches (FWUs) 17 21 (ii) NG Wagons (FWUs) 10 2
NORTH-EASTERN RAILWAY								
17. Gorakhpur Workshop	1903	Repairing of MG Steam locos, Coaches and Wagons.	POH of MG steam locos and BG & MG coaches and MG Steam Cranes.	28.6 hect.	2.13 hect.	6300	645	(i) MG Steam Locos 11 Nil (ii) BG Coaches (FWUs) 74 150 (iii) MG Coaches (FWUs) 150 60 (iv) MG Steam Cranes 1.5 1.5
18. Izatnagar Workshop	1913	Repairing of MG Steam locos. Expanded in 1923 for POH of coaches and wagons also. Steam Loco POH was stopped in 1986.	POH of MG coaches and wagons.	433014 Sq.Mts.	58096 Sq.Mts.	2900	398	(i) MG Coaches (FWUs) 110 100 (ii) MG Wagons (FWUs) 210 80
19. Samastipur Workshop	1881	POH of MG Steam Locos & rolling stock. Steam Loco POH and Coach POH was stopped in 1962 and 1983 respectively.	Manufacture of BG Wagons.	288000 Sq.Mts.	11300 Sq.Mts.	600	77	(i) MG Wagons (FWUs) 50 Nil (ii) BG Wagon 100 550

1	2	3	4	5	6	7	8		
NORTHEAST FRONTIER RAILWAY									
20. New Bongaigaon Workshop	1965	Repairing of BG & MG Coaches and MG Wagons.	POH of & MG Coaches and MG wagons.	899301 Sq.Mts.	37147 Sq.Mts.	3400	316	(i) BG Coaches (FWUs)	72	90
								(ii) MG Coaches (FWUs)	60	40
								(iii) MG Wagons (FWUs)	140	36
21. Dibrugarh Workshop	1881	Repairing of MG Steam locos, coaches and wagons. Shifted to present location in 1922.	POH of Coaches, Wagons and MG Steam cranes.	133430 Sq.Mts.	37147 Sq.Mts.	2100	268	(i) MG Steam Locos	3.5	Nil
								(ii) MG Coaches (FWUs)	50	40
								(iii) MG Wagons (FWUs)	90	60
22. Tindharia Workshop	1925	Maintenance of NG locos & rolling stock.	POH of NG Steam locos, Coaches & Wagons.	—	29971 Sq.Ft.	250	43	(i) NG Steam Locos	1	0.5
								(ii) NG Coaches (FWUs)	12	16
								(iii) NG Wagons (FWUs)	3.5	36
SOUTHERN RAILWAY									
23. Perambur Loco Workshop	1932	POH of Steam locos. POH of steam Loco stopped in 1983. Diesel Hyd. loco POH started from 1984-85 and Elec. loco POH started from 1986.	POH of Diesel Hydraulic and Elec. Locos, Diesel Cranes and Containers.	227507 Sq.Mts.	44830 Sq.Mts.	3800	654	(i) BG Diesel Hyd. Loco.	1	1.5
								(ii) BG Electric Loco	2.5	3
								(iii) BG Coaches	—	30

1	2	3	4	5	6	7	8		
24. Perambur (C&W)	1856	Repairing of Steam Locos, Coaches & Wagons.	POH of coaches and wagons.	485520 Sq.Mts.	78712 Sq.Mts.	9700	377	(i) BG Coaches (FWUs) (ii) BG Wagons (FWUs)	335 490	305 500
25. Golden Rock Workshop	1921	POH of BG & MG Steam locos, coaches & wagons. Loco POH also commenced in 1983.	POH of BG & MG diesel locos and MG coaches & Wagons; manufacture of BG & MG Wagons.	81 hect.	10 hect.	7600	1000	(i) BG Diesel Locos (ii) MG Diesel Locos (iii) MG Coaches (FWUs) (iv) MG Wagons (FWUs) (v) BG Wagon	5 5 155 45 —	6 4 120 22 700
26. Mysore Workshop	1924	Repairing of MG Steam locos, coaches & wagons. Taken over by Mysore State Railways in 1930 for POH of MG & NG Steam Locos, Coaches & Wagons.	POH of MG Steam Locos coaches and wagons; Construction of NG coaches	101171 Sq.Mts.	25293 Sq.Mts.	2500	—	(i) MG Steam Loco (ii) MG Coaches (FWUs) (iii) MG Wagons (FWUs) (iv) BG Coaches	3 55 Nil —	Nil Nil Nil 80
SOUTH-CENTRAL RAILWAY										
27. Lallaguda Workshop	1893	POH of BG & MG Steam Locos, coaches & wagons. BG locos and coaches being repaired from 1969 only.	POH of BG Steam Locos Coaches & Steam cranes.	139700 Sq.Mts.	42919 Sq.Mts.	4600	557	(i) BG Steam Locos (ii) BG Coaches (FWUs)	1.5 195	Nil 200

1	2	3	4	5	6	7	8		
28. Guntupalli Workshop	1976	Repairing of BG Wagons.	POH of BG Wagons.	1200000 Sq.Mts.	50275 Sq.Mts.	3000	379	BG Wagons (FWUs)	835	847
29. Tirupathi Workship	1987	POH of BG Coaches.	POH of BG Coaches.	141800 Sq.Mts.	48185 Sq.Mts.	980	508	BG Coaches (FWUs)	70	70
30 Hubli Workship	1885	Repairing of MG Steam Locos coaches & wagons.	POH of MG Steam Locos Coaches and Wagons.	105200 Sq.Mts.	39625 Sq.Mts.	4600	689	(i) MG Steam Locos	5	Nil
								(ii) MG Coaches (FWUs)	150	—
								(iii) MG Wagons (FWUs)	300	—
								(iv) BG Coaches (FWUs)	—	68
SOUTH EASTERN RAILWAY										
31. Kharagpur Workshop	1898	POH of BG Steam Locos, coaches & wagons. POH of Steam Loco stopped in 1989 & Diesel & Elec. loco POH started in 1989.	POH of BG Diesel Locos, Electric locos coaches, EMUs & Wagons	6.1 lakh Sq.Mts.	2.6 lakh Sq.Mts.	12000	1617	(i) BG Diesel Locos	8	8
								(ii) BG Electric Locos	2.5	4
								(iii) BG Coaches (FWUs)	225	255
								(iv) BG Wagons (FWUs)	950	950
								(v) BG EMUs (FWUs)	18	18
32. Raipur Workshop	1968	Repairing of BG bogie wagons.	POH of BG Wagons.	222.5 hect.	—	2000	133	BG Wagons (FWUs)	800	800

1	2	3	4	5	6	7	8		
33. Mancheshwar Workshop	1985	POH of BG Coaches.	POH of BG Coaches.	121 acres	—	1500	199	BG Coaches (FWUs)	80	100
34. Nagpur Workshop	1879	Maintenance of NG Locos and rolling stock.	POH of NG Steam locos, coaches, wagons; construction of NG coaches.	67580 Sq.Mts.	15418 Sq.Mts.	950	92	(i) NG Steam Locos	3	Nil
								(ii) NG Diesel Locos	Nil	1
								(iii) NG Coaches (FWUs)	45	45
								(iv) NG Wagons (FWUs)	90	22
WESTERN RAILWAY										
35. Lower Parel & Mahalaxmi Workshops	1876	POH of BG Coaches & wagons.	POH of BG Coaches & EMUs.	263476 Sq.Mts.	148994 Sq.Mts.	6000	464	(i) BG Coaches (FWUs)	235	250
								(ii) BG EMUs (FWUs)	82	102
36. Kota Worshop	1960	Repairing of BG Watons.	POH of BG Wagons.	459395 Sq.Mts.	49949 Sq.Mts.	3300	470	BG Wagons (FWUs)	940	950
37. Dahod Workshop	1931	POH of BG Steam Locos.	POH of BG Steam Locos and Steam cranes.	274262 Sq.Mts.	47550 Sq.Mts.	3400	638	(i) BG Steam Locos	5	Nil
								(ii) Elec. Loco Rebuilding	Nil	4.5
								(iii) BOX rebuilding (FWUs)	—	75
38. Pratapnagar Workshop	1922	POH of NG & NG Seam locos & coaches & building of MG & NG coaches.	POH of BG Coaches and wagons, including tank wagons, NG locos & wagons.	79310 Sq.Mts.	15050 Sq.Mts.	850	163	(i) BG Coaches (FWUs)	10	10
								(ii) BG Wagons (FWUs) (Tank)	70	100
								(iii) NG Locos	2	Nil
								(iv) NG Coaches (FWUs)	2	2
								(v) NG Wagons (FWUs)	4	2

1	2	3		4	5	6	7	8		
39. Ajmer (Loco) Workshop	1876	Repairing of MG Steam Locos & building of MG steam locos.	POH of MG Diesel & Steam Locos, POH of MG Steam cranes.	160000 Sq.Mts.	71363 Sq.Mts.	4200	415	(i) MG Steam Locos (ii) MG Diesel Locos (iii) BG Wagon Works sanctioned for 400 FWUs per month.	8 5	Nil 4
40. Ajmer (C &W) Workshop	1876	Repairing of MG Coaches & Wagons.	POH of MG Coaches & Wagons.	229310 Sq.Mts.	42691 Sq.Mts.	4400	329	(i) MG Coaches (FWUs) (ii) MG Wagons (FWUs) (iii) BG Coaches (FWUs)	230 300 —	130 160 88
41. Bhavnagar Workshop	1880	Repairing of MG Coaches.	POH of MG Coaches.	87660 Sq.Mts.	11493 Sq.Mts.	1100	41	MG Coaches (FWUs)	50	50
42. Junagarh Workshop	1925	Repairing of MG wagons.	POH of MG Wagons.	34140 Sq.Mts.	5268 Sq.Mts.	293	21	MG Wagons (FWUs)	70	50

4. In addition to these workshops, there are some more workshops in the Railways such as Civil Engineering Workshops (e.g. Track Machine Workshops at Allahabad, Jhansi etc.); Signalling Workshops (e.g. at Podanur, Gorakhpur, Byculla, etc.) and others at Sithouli (CR), Pandu in Assam and Baghdogra Workshop in West Bengal.

Central Organisation for Modernisation of Workshops (COFMOW)

5. A Central organisation for Modernisation of Workshops (COFMOW) was set up in 1979, for implementation of the workshop modernisation projects with IDA credit.

6. The role of COFMOW as defined by the Railways is as under:—

(a) Preparation of project reports for workshop modernisation.

(b) Preparation of technical specifications, procurement of M&P, delivery and commissioning of the same.

(c) Training of workshop personnel in operation and maintenance of machines.

(d) Monitoring the implementation of the projects.

(e) Review of surplus machines available on the railways/ production units with a view to use it against pending sanctions/future requirements to save on capital expenditure.

(f) Conversion of meter gauge machines to make them suitable for broad gauge to avoid scrapping of meter gauge assets and reconditioning of old machines wherever possible.

(g) Retrofitment of modern controls for improving the existing machines.

(h) Preparation of standard layouts and facilities in workshops for overhaul/maintenance of sub-assemblies to achieve high reliability. Four technical studies have been completed in the following areas:

(1) Roller bearing section for coaching stock.

(2) Repair and testing of overhead water tanks for passenger coaches.

(3) Maintenance facilities for high capacity draft gears.

(4) Facilities and layout required for maintenance of air brake equipment in workshops.

7. The jurisdiction of COFMOW covers entire Indian Railways workshops, maintenance depots and production units with respect to modernisation and improvement in layouts, procurement of machinery and plant etc.

8. Presently, COFMOW is handling the procurement of machinery and plant for the manufacture of 8000 HP ABB technology, 3 phase locomotives to be built at CLW. Procurement of M&P for conversion of MG workshops to BG at Ajmer, Jodhpur and Dibrugarh is also being undertaken.

9. COFMOW, in year 1995, has extended its role of procurement of machinery and plant and other equipments for other Ministries. In this regard, a Memorandum of Understanding (MoU) was signed with the Ministry of Human Resource Development (MHRD) in June '95 for utilisation of World Bank loan for Technical Education Projects for modernisation of the polytechnics in 19 States and Union Territories. This time bound project is being carried with the existing staff with marginal additions wherever needed.

10. The question of modernisation of workshops was studied in depth earlier by RITES and thereafter by Railway Reforms Committee and specific recommendations were made. When asked about the need for setting up of COFMOW for implementation of the workshop modernisation projects the Member (Mech.) stated:

> "Guidance was certainly taken from all the reports which you have mentioned. The COFMOW concept was for modernisation basically on two counts. One was that the best type of machinery available in the world may be used, as the state-of-the-art technology changed drastically in the eighties with the introduction of the computer technology.
>
> It was felt that if it was left to the Railways to acquire machinery and plants themselves, not only will they not be able to incorporate the latest advances but they may also not be aware of them. Secondly, if they do, there will not be any

rationalisation and there will be a variety of items of machinery available on different Railways.

Phase-I and II modernisation was financed largely by the World Bank. It was, therefore, conceived that if a central organisation does purchase by bulking the requirement of various modernization projects and draw out specifications in consultation with the leading builders, then we will get state of art machinery and tool and also at a much more competitive price because once the requirement is bulked then the machine producer will make more than one machine, which is economical.

Secondly, a centralised organization is in much better position to bargain. Even, now, they are doing studies to assist the Railways in this connection. The modernisation of workshops, as envisaged in the RITES Report, or the requirement of workshops, has drastically changed after the gauge conversion project was taken up. The workload of workshops has changed and the nature of work has also changed. The phasing out of steam locomotives was advanced. So, this is one item which is continuously being reviewed by the COFMOW."

11. When asked whether modernisation of workshops was undertaken prior to setting up of COFMOW, the Chairman, Railway Board stated:

"We have not made any major modernization before 1979, Upgradation of work was started in 1979".

12. Elaborating the need for establishment of COFMOW, the Chairman Railway Board further submitted:

"It was in 1970s that an attempt was made to change the old machinery available, improve productivity, improve reliability, reduce the time taken for undertaking repairs, overhauling, etc. It was felt that if the Organization is centrally placed and put directly under the control of the Ministry, considerable gains can be had. Before the setting up of COFMOW, there was no sustained effort in improving a workshop in totality and whatever improvements were done, these were done through the Chief Mechanical Engineer on the Zonal Railway. It was only in 1979, that there was a major breakthrough.

One reason for this was that we got aid at that time. That was used for modernization of workshops. There have been several objectives for this. As has been given, the first objective is that they are in a position to procure machine tools, such as planning machines, drilling machines etc. with the latest technology available in the market on the expertise which is not available with the Railways."

Giving examples in this regard, he added:

"In the past, we never had machines which worked on the Computerised Numerically Controlled principle. It produces exactly an identical item and everything is controlled. The precision is very high.

They could specialised in plant and machinery procurement and in that process, now very good machine tools exist in Railway workshops. For example, we have very good Electric Overhead Travelling Cranes. EOTs are of various types.

They were also associated in proving the layouts so that productivity could increase. For example, work is best done by the unit-flow participle. Otherwise it moves to and fro down thereby taking more time. Some of our workshops are historically old. From 1850s onwards, they have been in existence. The oldest workshop is Perambur which is on the Southern Railway. They have been in existence for more than hundred years. This organization was required to suggest changes that can be effected."

Stating about improvement in reliability in the Railways, he told the Committee:

"Improvement in reliability comes not only from COFMOW's efforts but also from various sources. It is because of better machines, better process. For example, if painting quality is good, then to that extent, reliability improves. Reliability improvement is also another factor. Several objectives have been set forth from 1979. They have been doing quite well.

Then there is the factor of economy achieved by mass procurement. Cost may differ from one purchase to another.

Upgradation of specifications and bulk purchase was another idea with was thought of."

13. It was pointed out that the Railway Convention Committee had suggested that COFMOW should be upgraded into a quasi-permanent organization. When enquired as to whether any decision had been taken in this regard by the Railways, the Member (Mech.) stated:

"My personal view is that COFMOW is here to stay because we have seen the results of its existence. It has been very positive. But at present, the posts are not permanent and they keep them getting reviewed year after year."

Modernisation of Workshops and their Capacity Utilisation

14. The modernisation of workshops had been planned in three phases. Following statement shows the completion of work of modernisation during Phases I & II as furnished by the Ministry of Railways :

Phase I

(Rs. in crores)

Workshop	Cost			Completion dated		Time over run
	Original anticipated	Sanctioned	Increase	Original	Final	
Matunga	5.57	18.00	12.43	31.3.82	31.3.83	6 Yrs.
Kancharapara	8.06	14.58	6.52	31.3.82	31.3.91	9 Yrs.
Kharagpur	6.82	13.30	6.48	31.3.82	31.3.86	4 Yrs.
Lower Parel	3.40	6.78	3.38	31.3.82	31.3.86	4 yrs.

Phase II

(Rs. in crores)

Workshop	Cost			Completion dated		Time over run
	Original anticipated	Sanctioned	Increase	Original	Final	
Parel	20.70	17.61	(-) 3.09	30.6.88	31.3.92	3 Yrs. 9 m
Liluah	15.67	21.07	5.40	30.6.88	31.3.92	3 Yrs. 9 m
Jagadhri	19.31	38.34	19.03	30.6.88	31.3.93	4 Yrs. 9 m
Golden Rock	25.10	28.48	3.38	30.6.88	31.3.93	4 Yrs. 9 m
Kharagpur	26.50	42.53	16.03	30.6.88	31.3.93	4 Yrs. 9 M
Ajmer	26.05	31.81	5.76	30.6.88	30.9.92	4 Yrs. 3 m

15. Asked about the objectives of the modernisation of above workshops, the Ministry of Railways stated as under:

(a) *Matunga workshop*

(i) Replacement of overaged M&P.

(ii) Reduction in POH time of EMU from 35 to 20 days.

(iii) Reduction in POH time of coaches from 26 to 18 days.

(iv) Reduction in POH time of CCV from 44 to 34 days.

(b) *Kancharapara workshop*

(i) Reduction in POH cycle time of conventional coaches from 28 days to 22 days.

(ii) Increase in POH capacity of conventional coaches from 1080 to 1560 units per months.

(iii) Reduction in POH time of EMUs from 35 days to 30 days.

(iv) Reduction in POH time of Elect. locos from 35 to 30 days.

(v) Increase in POH capacity of Elect. locos from 70 to 75 per year.

(vi) Increase in POH capacity of EMUs (MC) from 7 to 10 per month & EMU (TC) from 24 to 28 per month.

(c) *Kharagpur workshop*

(i) Increase in POH capacity from 5 locos to 8 locos per month.

(ii) Reduction in POH time of Diesel locos from 21 to 15 days.

(iii) Reduction in POH time of wagons from 4.2 to 4 days.

(iv) Reduction in POH time of coaches from 18.5 to 17 days.

(d) *Lower Parel workshop*

(i) Reduction in POH time of coaches from 23 to 19 days.

(ii) Increase in POH capacity of coaches from 210 to 235 (Four Wheeler Units)

Phase II

(a) *Parel workshop*

(i) Increase in POH capacity of Diesel Locos from 6 to 8 per month.

(ii) Reduction in POH time of Diesel locos from 23 t0 18 days.

(iii) Decrease in POH time of Diesel hunting locos from 45 to 25 days.

(b) *Liluah workshop*

(i) Increase in POH capacity of coaches from 316 to 400 (Four Wheeler Units) per month.

(ii) Increase in POH capacity of wagons from 900 to 1100 (Four Wheeler Units) per month.

(iii) Decrease in POH time of coaches from 24 to 19 days.

(iv) Decrease in POH time of wagons from 10 to 8 days.

(c) *Jagadhri workshop*

(i) Increase in POH capacity for wagons from 1200 to 1500 (Four Wheeler Units) per month.

(ii) Decrease in POH time of coaches from 21 to 12 days.

(iii) Decrease in POH time of wagons from 7 to 4 days.

(d) *Golden Rock workshop*

(i) Increase in POH capacity of Diesel locos from 62 to 12 per month.

(ii) Increase in capacity of corrosion repair of coaches from 30 to 50 per month.

(iii) Reduction in POH time of Diesel locos from 23 to 19 days.

(iv) Reduction in POH time of coaches from 15 to 13 days.

(e) *Kharagpur workshop*

(i) Increase in capacity of Elect. loco CH from nil to 3.3 per month.

(ii) Increase in POH capacity of EMU Motor coaches from nil to 2 per month and Trailer coaches from nil to 7 per month.

(iii) Increase in capacity of corrosion repairs of coaches from 17 to 20 per month and increase in special repair capacity of Elect. locos from nil to 0.7 per month.

(iv) Reduction of POH time for coaches from 17 to 16 days.

(f) *Ajmer workshop*

(i) Increase in POH capacity of MG coaches from 222 to 350 (Four Wheeler Units) per month.

(ii) Reduction in POH time of MG Diesel Locos from 47 to 18 days.

(iii) Reduction in POH time of MG coaches from 21 to 14 days.

(iv) Reduction in POH time of wagons from 6 to 4 days.

16. When asked whether the modernisation of these workshops was completed by the target dates or the dates were extended and if so, the reasons therefor in respect of each workshop, the Ministry of Railways submitted to the Committee as under :

Phase I

The target of completion of the Modernisation Project Phase-I was fixed as March '82 at the time the project was initially conceived. Workshop Modernisation Project Phase-I was the first of its type ever undertaken by the Indian Railways. The period of 342 years for project implementation was based on the assumption that specifications for all machines could be drafted by the Zonal Railways within 6 months and tendering could follow immediately. However, it was later found that the technical specifications prepared by Zonal Railways were not suitable. COFMOW was therefore, required to undertake the work of collection of technical data about machine tool availability, their characteristics and design feature. It was, therefore, not possible to procure, install and commission all machines within a period of 342 years. There was therefore no avoidable cost and time overrun.

Phase II

No expenditure can be incurred on a work unless the detailed plans and estimates are sanctioned. In the above works of modernisation of workshops, the detailed plans and estimates were sanctioned after rationalising the workload of various workshops and reviewing the scope of the works.

In case of Parel workshop, there was no cost overrun. The cost overruns in case of Liluah, Golden Rock and Ajmer are mainly attributed to the long gestation period required for such major works.

The work of Jagadhri workshop was initially sanctioned at a cost of Rs. 19.31 crore in 1984-85. Thereafter, Railway Board appointed M/s RITES as consultant to study the additional inputs required to achieve the desired objectives of modernisation. Railway Board accepted the final report submitted by M/s RITES and sanctioned the abstract estimate involving a cost of Rs. 32.68 crore on 6.10.87. The detailed estimate of Rs. 37.82 crore on 6.12.90 was later approved.

In case of Kharagpur workshop, a need was felt to modify the scope of the work after the sanction of detailed estimate to derive the desired benefits of the modernisation and some of the essential M&Ps were included in the revised estimate costing Rs. 42.53 crores.

17. When enquired about average performance before and after modernisation of these workshops, the following details were submitted by the Ministry :

Workshop Modernisation Phase-I

POH repair days

Workshop	Periodic Overhaul activity	Repair days before mod-ernisation	Repair days after mod-ernisation
Kanchrapara	Elec. Locomotives	35	26
	EMUs	35	26
	Rewinding of Traction Motors	35	52
Kharagpur	Diesel Locomotive	21	14.6
	Coach	18.5	14.7
	Wagon	4.2	4
Matunga	EMU	35	24
	Coach	26	17
	OCVs	44	25
Lower Parel	Coach	23	17.8

POH Outturn per Month

Workshop	Locomotive		EMUs		Coaches	
	Before	After	Before	After	Before	After
Kanchrapara (Electric Locos)	5.85	0	31	40	—	—
Kharagpur (Diesel Locos)	5	8	—	—	—	—
Matunga	—	—	40	78	232	306
Parel	—	—	—	—	196	220

Workshop Modernisation Phase-II

Workshop	Activity		Before Modern-isation	After Modern-isation
1	2		3	4
Parel	Loco POH	Diesel Elect.	72	108
		Diesel Hydraulic	24	43
	Time for Loco POH (Days)	Diesel Elect.	23	18
		Diesel Hydraulic	45	29.1
Liluah	Coach POH (FWUs)		3600	4260
	Wagon POH (FWUs)		13000	13600
	Time for coach POH (days)		24	18.8
	Time for wagon POH (days)		10	6.1
Jagadhri	Coach POH (FWUs)		3000	3000
	Wagon POH (FWUs)		12000	12700
	Time for Coach POH (days)		21	17.1
	Time for wagon POH (days)		6.9	6.9

1	2	3	4
Golden Rock	Loco POH Diesel Elect.	77	120
	Coach POH (FWUs)	96	96
	Time for Loco POH (days)	23	19
	Time for Coach POH (days)	15	13
Kharagpur	Electric Loco POH	0	58
	Coach POH EMU (FWUs)	0	102
	Time or Coach POH (days)	17	16.3
Ajmer	Loco POH Diesel Electric	36	60
	Coach POH (FWUs) MG	2600	2600
	Time for POH (days) Loco	47	24
	Coach	21	18
	Wagon	8	6

18. The following are the details of the modernisation process of the workshops in Phase-III :

(Cost in Rs. Crores)

Workshop	Year of Sanct.	Sanct. Cost	TDC	Financial Progress
Phase III				
1. Jhansi W/s	90-91/95-96	9.77	31.12.97	5%
2. Bhusawal W/s	1991-92	8.00	31.3.96	100%
3. Kancharapara W/s	1990-91	11.69	31.3.98	32%
4. Jamalpur W/s	89-90/95-96	9.63	31.3.98	5%
5. Alambagh W/s	92-93/95-96	6.85	31.3.97	25%

Workshop	Year of Sanct.	Sanct. Cost	TDC	Financial Progress
6. Charbagh W/s	1996-97	4.63	31.3.99	Nil
7. Jodhpur W/s	1995-96	7.01	31.3.98	15%
8. Dibrugarh W/s	1995-96	6.27	31.3.98	9%
9. Perambur W/s	89-90/95-96	9.89	31.3.98	18%
10. Hubli W/s	1995-96	11.47	31.3.97	54%
11. Kota W/s	90-91/95-96	7.34	31.12.97	14%
12. Ajmer W/s	1995-96	5.65	31.3.98	9%

19. The Ministry of Railways in their note also stated that in respect of five workshops mentioned at Sl. Nos. 1, 4, 5, 9 and 11 above the scope of modernisation as envisaged earlier was curtailed and the work was approved at a reduced cost in the year 1995-96. Asked about the reasons for reducing the cost of modernisation, the Ministry stated that due to large scale gauge conversion from MG to BG, some workshops were converted to undertake the BG workload thereby making use of the available infrastructural facilities to maintain BG Rolling Stock. In view of this changed scenario, the scope of these five workshops was curtailed, reducing the cost of the works. When the Committee asked about the cost envisaged earlier and the reduced cost, the Ministry in their written note submitted :

(Rs. in crores)

	Cost envisaged earlier	Reduced cost in 1995-96
Jhansi workshop	29.91	9.77
Jamalpur workshop	64.74	9.63
Alambagh workshop	21.81	6.85
Perambur workshop	56.03	9.89
Kota workshop	27.44	7.34

20. Salient features of the modernisation of the workshops being covered under Phase-III as given by the Ministry of Railways are as under :—

A. Jhansi Workshop

Productivity and quality improvement works such as

(i) Improvement in POH cycle time.

(ii) Material handling facilities.

(iii) Development of facilities for Roller Bearing/Cartridge Bearing and Air Brake Stock etc.

B. Jamalpur Workshop

(i) To improve performance and availability of Rolling Stock.

(ii) To improve quality for ensuring safety and reliability.

(iii) To improve inspection standards for quality.

(iv) To control unit repair cost by improved utilisation of men, machines and materials.

(v) To improve Material Handling facility in and around shops.

C. Bhusawal Workshop

(i) Reduction in POH time of Electric locos from 23 to 18 days.

(ii) Improve the quality of repairs.

D. Kancharapara Workshop

(i) Reduction in POH time of EMU coaches from 28 to 21 days.

(ii) Increase in POH capacity of EMU from 122 to 240 per year.

(iii) Increase in rewinding capacity of electric machines.

(iv) Increase in reliability of repairs.

E. Alambagh Workshop

(i) Increase the POH outturn of Non AC coaches to 210 units per month.

(ii) Increase the POH outturn of AC coaches to 40 units per month.

(iii) Reduce the number of POH days for non AC coaches from 21 days to 18 days.

(iv) Reduce the number of POH days for AC coaches for approximately 35 days to 30 days.

(v) Manufacture and supply of spare parts for POH and for maintenance of Rolling Stock in Divisions.

F. Perambur Workshop

(i) Infrastructural facilities to improve the productivity, quality and reliability of coaches and wagons.

(ii) Repairs facilities for Cartridge Bearings and Air Brake equipments.

G. Hubli Workshop

Conversion of workshop from MG to BG for undertaking POH of 150 FWUs of coaches/month.

H. Kota Workshop

(i) To reduce POH cycle time of BG freight wagons in wagon repairs shop.

(ii) To improve reliability/performance of BG freight wagons and thus increase availability of such rolling stock in active service.

(iii) To effect economy in the cost of BG freight wagon maintenance.

(iv) To introduce improved repair technology and upgradation of repair practices to make use of technical innovations in relevant fields.

I. Charbagh Workshop

Improvement in quality, reliability and refurbishment of Rolling Stock.

J. Jodhpur Workshop

Conversion of workshop from MG to BG for undertaking POH of 100 FWU of non AC BG coaches per month.

K. Dibrugarh Workshop

Conversion of workshop from MG to BG for undertaking BG coach POH @ 75 FWUs per month.

L. Ajmer Workshop

Conversion of workshop from MG to BG to undertake POH of BG coaches @ 125 FWUs per month and BG wagons @ 400 FWUs per month.

21. Modernisation of Jhansi workshop was sanctioned in 1991. Later it was frozen. When asked about the reasons for doing so, the Member (Mech.) stated :

> "The basic reason for freezing the modernisation of this workshop was that the earlier projects were all financed by the World Bank, so the money was available. Later on these were not financed by the World Bank; these were financed by our own internal resources. So, we did a need-based review, a review of pruning and keeping only the most essential items necessary for modernisation. After review, again in 1995-96, we revived the project with reduced scope".

Clarifying the position further the Chairman, Railway Board stated :

> "I would like to add one thing. One reason for freezing was gauge conversion. When meter gauge workshops got converted into broad gauge, like Hubli, Mysore, Jodhpur and Bikaner, a review of the total capacity available was required. In the Eighth Five Year Plan, a review was done and a booklet was prepared. For the Ninth Plan, we are again doing a review.
>
> The second point is about diversification. I would like to submit before the Committee that we do activities which are not strictly connected with overhauling hundred per cent but for making use of the resources and infrastructure available. There are items like brake blocks, leaf springs and many other components required for wagon overhauling. So, making use of the existing

infrastructure for manufacture is an accepted feature and quite a few details have been given."

22. During the study tour to the Kanchrapara workshop, the Committee had observed that the working conditions of their workers were very pitiable. When the Committee wanted to have their comments on this aspects, the Chairman, Railway Board stated :

> "We have told the General Manager that he should improve the workshop and we will monitor it at our level. We can give the Action Taken Report on this".

23. The original estimate for modernisation of the Jamalpur Workshop was Rs. 64 crore. However, the amount was reduced to Rs. 9.63 crore in 1989-90. Later after 5 per cent work was done, it was frozen. When asked about the reasons for reducing the provision, the Chairman, Railway Board stated :

> "This work is of 1989-90. By that time the gauge conversion scheme came up in January 1992 after which it got frozen by incurring an expenditure of five per cent. Now we have reviewed it and there is a progress of 22 per cent.

The Member (Mechanical) also clarified in this regard :

> "The most important object of the investment was to increase the capacity of POH locos from six to ten. The main reason of the reduced amount is that this capacity is not required by the individual base."

24. When enquired about the objectives envisaged earlier, the Ministry of Railways stated as under :—

(i) Increase in capacity for POH of Diesel locos from 6 to 10 per month.

(ii) Reduction in POH time of Diesel locos from 25 to 16 days.

(iii) To improve layout and material handling facilities.

(iv) To improve the workmanship and reliability.

25. During the course of examination of the 'Demands for Grants of the Ministry of Railways for the year 1997-98', their attention was drawn towards the shortage of wagons. It was also pointed out that

there was surplus capacity in Jamalpur Workshop which could have well utilized with the proper planning. Reacting thereupon during evidence the Financial Commissioner stated :

> "I had mentioned earlier in some forum that we want to give a permanent load to Jamalpur. We have proposed this and the discussion is at the Board level to manufacture wagons at Jamalpur. Presently they have been given the load to repair wagons which is not permanent."

When the need for proper planning for this workshop was stressed, the Chairman, Railway Board stated :

> "I would like to submit that on the one hand technological changes have an impact on manpower; and on other hand, we have the inherent need to keep costs low. So, there a conflict between these two, of reducing cost. But we are trying to solve it. It is also our objective to affect the workers in the least possible manner. Some reduction and some changes are inevitable. On the Indian Railways, on a total staff of 15.8 million, 1,72,000 only are in workshop. It is about 12 per cent. It is not possible to sustain this in the national objective of efficient output. After all, that is our objective.
>
> So, without affecting the worker, without affecting the industrial relation, we are trying to bring a technological change."

26. During the study tour to Liluah workshop, the Committee were informed that the capacity of the workshop was not being fully utilised. Thereupon, the Member (Mech.) stated :

> "The productivity of Liluah workshop went up with concerted efforts. It happens in every workshop. Sometimes material is not available from the various types of areas. Sometimes speed is not there. Sometimes there is the problem of labour adjustment. Liluah Workshop had some problems which were overcome and for the last one year, the performance has improved considerably".

27. The Committee pointed out that the workshop at Dahod was lying idle and consequently the Railways had been paying idle wages to about 3400 workers. The Member (Mech.) stated :

> "Dahod is a premier workshop of not only the Western Railway but of the Indian Railways where the steam locomotives were

being overhauled earlier. Those days have gone now. It is one workshop which we are not prepared to let go without work. We have planned an investment of about Rs. 16 crore for overhauling the electric locomotives there. It is not just overhauling but then it is re-building just like we have at Patiala for diesel locomotives. Dahod is chosen for electric locomotives. The project is already in full swing."

28. Asked about the reasons for not utlising the full capacity of most of the Workshops, the Chairman, Railway Board stated during evidence :

"Change in technology has had an effect on Indian Railway Workshops. One is replacement of steam engines. Second is the replacement of wooden coaches with steel bodied ones. The coaches and engines of the Railways to require replacement. It is the objective of the management to make the replacement with more efficient ones and cost effective. There is no doubt that we have redundant activities in workshops. For example, we have a carpentry section. There is not a single coach which is wooden bodied. We have large-scale foundries which are not required. Our effort today is that, on the one hand, we do not create an industrial relations problem; we do not send anyone out. Secondly, within that, we try to reduce the staff and then rationalise the staff in a proper manner. Keeping this in view, we are doing a review workshop by workshop. In a workshop, it is not easy to laterally shift staff. If carpentry section gets closed, the skilled hand can be retrained for other trade. When he goes to another section, staff of that section gets affected in regard to incentive. They do not accept this easily. It becomes a very sensitive issue. We are handling this with lot of caution. Lateral shifting of staff is a major problem".

Clarifying the position in this regard the Member (Mech.) stated :

"We have done the reviews workshop-wise. The problem has basically arisen after we closed the steam loco POH activity. They had a very large chunk of manpower, and at a number of workshops which you mentioned, they were more or less doing this work only. When we phased out that activity replacing it with diesel locos, the requirement of manpower went down drastically. The steam locos were replaced by a

lesser number of diesel locos. The work content of diesel locos for POH is much less than that of a steam loco. We have tried to give them alternate load. At some places, we have been more successful and at some places we were not very successful. For example, in Jamalpur, after the steam locos were phased out, we entrusted them with the task of rebuilding of BOX wagons, crane building activity apart from diesel locos which is a legitimate replacement We have also entrusted them with the task of manufacturing tower cars. Now, we also want to ask them to manufacture propelled action relief cars. We have tried to give whatever workload is available o them. But still we do have a considerable amount of capacity available, especially in the steam loco shops. That is why, as the Chairman has told you, we have formed a Committee to again review the activity of each workshop to see how best they can be rationalised. The Railways have also been told to carry out a *de novo*, zero-based review of labour requirement so that we know where we stand".

29. The Ministry of Railways gave the following information in regard to the number of vacancies in each workshop (scale-wise):—

Railway Workshops	2375-3500	2000-3200	1640-2900	1600-2660	1400-2300	1320-2040	1200-2040	1200-1800	950-1500	825-1200	800-1150	775-1025	750-940
1	2	3	4	5	6	7	8	9	10	11	12	13	14
CENTRAL													
Parel	10	18	—	25	27	84	17	—	84	—	313	—	94
Matunga	4	4	—	8	34	33	33	45	170	—	17	—	61
Jhansi	—	—	—	—	14	40	—	32	80	—	75	—	26
Bhopal	—	—	—	1	5	4	8	—	14	—	1	—	1
Kurduwadi	—	—	—	—	—	10	18	—	32	—	8	—	20
EASTERN													
Kanchrapara	10	42	1	28	57	61	10	51	356	—	814	—	—
Jamalpur	7	104	4	37	121	146	9	21	29	—	—	—	15
Liluah	15	39	1	9	75	83	12	46	357	—	121	4	44

1	2	3	4	5	6	7	8	9	10	11	12	13	14
NORTHERN													
Jagadhari	3	16	—	2	43	19	—	59	104	—	198	—	—
Alambagh	—	9	—	19	30	15	—	82	146	—	590	—	—
Charbagh	—	18	—	7	10	—	—	—	—	—	328	—	119
Amritsar	1	9	—	1	18	—	—	9	52	—	163	—	60
Jodhpur	3	5	—	5	25	17	—	53	164	—	236	—	100
Bikaner	—	5	—	3	3	—	—	11	36	—	156	—	—
Kalka	1	2	—	2	6	11	—	—	25	—	60	—	8
NORTH EASTERN													
Gorakhpur	6	22	—	48	103	64	63	53	258	—	160	—	18
Izzatnagar	2	9	—	12	38	68	30	59	85	—	81	—	5
Samastipur	—	2	—	2	3	4	1	—	4	—	20	—	8

1	2	3	4	5	6	7	8	9	10	11	12	13	14
NORTHEAST FRONTIER													
New Bongaigaon	5	7	—	4	7	13	—	7	140	—	38	—	35
Dibrugarh	—	8	—	9	17	17	—	11	24	—	108	—	—
Tindharia	—	1	—	—	7	8	—	4	8	—	19	—	—
SOUTHERN													
Perambur (C&W)	3	12	—	—	47	39	—	29	205	—	35	—	—
Perambur (Loco)	—	8	—	20	7	4	—	12	18	—	57	22	3
Mysore	—	3	—	—	—	—	5	—	121	—	35	—	4
Golden Rock	4	17	—	—	54	85	—	25	176	—	40	—	12
SOUTH CENTRAL													
Lalaguda	1	2	—	13	12	17	3	1	59	3	—	—	176
Hubli	5	22	—	10	26	16	37	34	270	—	—	—	477
Rayanapadu	—	1	—	6	8	16	6	6	84	—	—	2	1
Tirupati	—	3	—	3	4	—	—	1	2	2	—	3	43

1	2	3	4	5	6	7	8	9	10	11	12	13	14
SOUTH EASTERN													
Kharagpur	16	7	—	61	72	121	24	116	424	—	585	—	244
Nagpur	1	1	—	—	5	—	1	—	4	—	—	—	—
Mancheswar	3	4	—	6	15	25	1	16	91	—	—	—	14
Raipur	—	7	—	2	37	13	2	61	4	—	—	—	97
WESTERN													
Parel-Mahalaxmi	2	—	—	41	17	49	—	55	159	—	74	—	29
Kota	—	2	1	—	16	35	1	4	8	—	76	—	—
Dahod	2	25	4	14	12	44	2	15	26	—	3	61	—
Pratapnagar	—	—	—	—	5	10	11	—	13	—	51	1	—
Bhavnagar	—	2	—	7	—	10	2	—	51	—	—	—	—
Junagarh	1	1	—	1	—	9	—	—	1	—	—	—	—
Ajmer C&W/Loco	4	8	—	44	88	81	—	141	141	—	160	41	33

30. The Committee find from the above Table that there are a number of vacancies in various scales in every workshop. Asked about the reasons therefor, the Member (Mech.) stated :

> "We have a total vacancy of about 14,500 in all the workshops which is 8.5 per cent of the sanctioned strength. The extent of vacancies varies from shop to shop. By and large wherever the work is defined and the posts need to be filled up, we have permitted the recruitment. As I mentioned in the last sitting. We have asked our workshops to carry out the zero-based review for manpower requirement. The requirement has gone down drastically and in a few of the workshops, with the phasing out of the steam locomotives, such a review will bring out what exactly is required to be filled up."

31. In reply to a question as to why the review had not been done earlier, the Member (Mech.) stated :

> "That was ordered two months back. It is a very difficult exercise. It is also linked with what the workshop is going to do ultimately in the revised scenario which is also being examined by a Committee in the Board. We have set a target of six months."

32. When further asked as to why the review was not carried out earlier as the steam locos were phased out in most of the Railways about four years back, the Member (Mech.) stated :

> "Unfortunately the zero-based study was never done. It is unfortunate. What they can do is to assess the requirement. This work has come down plus and minus etc. It is not really correct in a situation like this to assess without verification. That is why we had a pilot scheme at Lower Parel, Bombay where the zero-based study was done."

33. When enquired how the Ministry of Railways could achieve better improvements, the Chairman, Railway Board stated :

> "It is by having a better lay out. For example, if a coach moves to and fro, it losses time. If it is uni-flow, one after another, a very well organized method of movement, then it reduces the time cycle. Lay out plays an important part.

Second, by having machines with better productivity so that they can turn out an item much faster.

The third factor has been the concept of unit replacement. For example, if I have two bogies already assembled and fit, as soon as a coach comes for POH, I can run out the old bogies and fit the new bogies so that I do not have to spent time on basic repairs. So these concepts are used."

34. Out of the 44 workshops, modernisation of 17 workshops had been taken up. When asked about the modernisation of the remaining workshops, the Member (Mech.) stated :

"I would not say that they have been studied in detail. I am not aware as to whether a study has been done, but *prima facie* we do not feel that there is any necessity to make any drastic investment in those workshops which are left out. The works programme is always there where we augment or replace machinery and plant, but as a project, it is not required."

35. In reply to a question whether there was any need for any major investment or upgradation of technology in these workshops, the Member (Mech.) stated:

"I do not think a workshop-wise study has been done. Another study is on now where they would decide on the loading of various workshops and what activities should be carried on there. After that we will have another look as to whether any further modernization is required."

Need for More Workshops

36. The Ministry of Railways submitted the following details in regard to the increase in Rolling Stock of Railways from 1950 till date :

		1950-51	1995-96
Locos			
	Steam	8120	209
	Diesel	17	4313
	Electric	72	2387
Coaches			
	PCVs	13109	29758
	EMUs	460	3692
	Wagons	205596	280791
	OCVs	6059	5654

37. Although there is a substantial increase in number of wagons, coaches and locos, the number of workshops has gone down. When asked whether there was any need for more workshops, the Chairman, Railway Board stated:

> "Two feature are to be taken note of. One is that POH of steam locomotives have almost disappeared. Earlier the holding was 8120 and now there are hardly 200 steam locos. There are lot of steam loco workshops.
>
> Second thing is that each workshop has seen some kind of upgradation in Phase I, II and III. There capacity has also increased. With these two features we do not really have any shortage of workshops as such.
>
> Thirdly, it is our definitive view that with the introduction of new technologies, the periodicity of overhauling will definitely increase from 12 months to 18 to 24 months. If that happens, it would not be a correct step on the part of the management to increase the number of workshops without a very careful analysis."

He further stated :

> "I would like to mention about Indian Railways as a whole. We have not yet made region-wise assessment. Overall, our capacity is quite adequate because two features are taking place. The first one is that we are trying to increase the POH cycle by better technology, and reduce time taken for POH. Secondly, we have converted metre gauge workshops into broad gauge. This has added to the capacity. From the information given by us, it would appear that the capacity is quite okay; and region-wise and Railway-wise re-appraisal is being made."

38. There are general complaints that railway coaches, wagons, locos, etc. are poorly maintained. When asked about the reasons therefore, the Ministry of Railways replied in a written note as under :—

Maintenance of coaches, wagons and locomotives in shops has generally been satisfactory as it has helped to improve their utilisation

and also the reliability on sustained basis. This can be seen from the figures given in the table below :—

Reliability indices	91-92	92-93	93-94	94-95	95-96
1	2	3	4	5	6
Coach failure	573	579	602	604	432
Wagon Detachments	92798	81957	71537	58413	44242
Diesel Loco Failures	13609	12753	11822	10220	8474
Elec. Loco Failures	8112	7957	7047	6219	5891
Utilisation Indices					
					(PROV)
Wagon Km/Wagon day	113.2	116.4	125.0	138.5	149.6
Net tonne Km. (NTKM/wagon day)	1439	1457	1506	1590	1754
Passenger Coach Vehicle Km/Vehicle day-in-use	406	410	414	426	N.A.
Elec. Loco Km/day/Engine on line	349	367	377	377	N.A.
Diesel Loco/Km/day/ Engine on line	358	343	345	351	N.A.

As regards complaints, these are generally related to cleanliness and passenger amenities in coaching services but all out efforts are being made to further improve the coach maintenance *i.e.* converting the weaknesses noticed in Quality Audit, into strength in a systematic manner, mid-life rehabilitation of coaches, improvement in illumination level of coaches by using 110V system, use of PVC flooring, etc."

39. When asked whether the amount being spent at present on maintenance was sufficient or there was a need for enhanced provision, the Member (Mech.) stated :

> "We have, this year for the first time, put in a very ambitious programme for internal rebuilt of coaches and we have provided sufficient money also for this—about Rs. 3 lakh to 4 lakh per coach. Money is always a constraint. I cannot possibly say that we have plenty of money, but we do hope that with new scheme of rehabilitation, we will at least be able to make an improvement."

40. Admitting about the poor condition of coaches, the Chairman Railway Board stated :

> "I do admit that regarding maintenance of coaches, much is still required to be done. I would like to divide this issue into two parts. The first is the reasons and response of the workshops and the second one is the reasons and response from the open line which operates the coaches. I would first like to deal with the first issue that is, the issue of workshops. It is the duty of the workshops that after a coach is overhauled, no major complaint arises within a reasonable period, that is 100 days."

He further stated :

> "In 1996-97, within 100 days, approximately 0.9 per cent of coaches failed. I would say that this is negligible. In 1995-96, it was 1.2 per cent. So, it has come down in 1996-97 but in our view this still requires to be reduced. This is en route detachment. It is the responsibility of the workshop. It is very painful to change a coach in-between. We are monitoring this very closely and it is our effort to see that the percentage comes down substantially.
>
> A lot of work has been done and still a lot requires to be done. This is an area which is now being looked after."

41. As per details furnished by the Ministry of Railways the position of arrears of periodic overhauling of Locos/ Coaches/ Wagons/OVSs is as under :—

(Figures in %age)

Railway	Locos		Coaches			Wagons	EMUs	Remarks
	Diesel	Electric	PCVs	OCVs	Over all			
Central	BG	Nil	Nil	7.22	7.78	7.31	6.96	13.82	No MG on C. Rly.
	NG	—	—	—	—	—	Nil	—	
Eastern	BG	2.5	8.18	8.16	6.76	7.94	6.60	24.1	No MG on E.Rly.
	NG	Nil	—	—	—	10.95	Nil	—	
Northern	BG	1.6	Nil	9.3	7.1	8.2	5.9	Nil	Figures are as on 31.1.97
	MG	Nil	—	1.8	3.2	2.6	3.8	—	
	NG	1	—	—	—	1	—	—	
North	BG	Nil	—	1.44	Nil	1.42	6.78	—	Figures are as on 31.12.96
Eastern	MG	15	—	1.06	Nil	0.98	0.77		No. NG rolling stock.

(Figures in %age)

Railway	Locos		Coaches				Wagons	EMUs	Remarks
	Diesel	Electric	PCVs	OCVs	Over all				
North-east	BG	Nil	—	6.9	17.4	7.8	9.3	—	
Frontier	MG	18.0	—	10.3	14.8	11.2	15.6	—	
	NG	Nil	—	Nil	Nil	Nil	—	—	
Southern	BG	Nil	3.0	5.85	5.78	5.81	8.24	Nil	No. NG rolling stock
	MG	Nil	—	9.91	12.30	10.10	8.94	Nil	
South Central	BG	Nil	—	3.03	16.93	4.04	5.52	—	Figures are as on
	MG	Nil	—	—	—	—	Nil	—	31.12.96
South Eastern	BG	Nil	Nil	7.14	13.32	7.62	10.2	10.62	No NG rolling stock
	NG	Nil	—	Nil	Nil	Nl	Nil		No. MG rolling stock
Western	BG	2.93	9.6	10.89	27.51	12.97	5.82	Nil	Figures as on 31.12.96
	MG	Nil	—	4.62	8.04	5.11	1.26	—	
	NG	Nil	—	—	—	33.43	Nil	—	

Other Activities (Besides POH) of the Workshops

42. The Ministry of Railways furnished the following details about the other activities (including targets and achievements in regard to these activities for the last three years) of different workshops :—

Railway/Workshop/ Activity	Target/ month	Actual (Av./month) 93-94	94-95	95-96	96-97 (upto Dec.)
Central Railway					
Parel					
Foundry Iron (M.T.)	791	838	781	585	787
Rewinding of TM & TG	16	23	22	24	23
Matunga					
Corrosion Repairs Coaches	25	21	20	21	25
Rehab.	—	3	2	2	1
Rewiring	—	2	2	2	1
Supply of Wheels	200	119	149	131	135
Supply of Springs	2310	1648	1319	1908	1309
Jhansi					
Repairs Unloadable BOX Wagons	100	127	97	114	107
Conversion of BOX Wagons to Container Flat	35	3	26	31	38
Supply of Wheels	550	762	527	373	407
Supply of Springs	2210	1840	1811	1504	934
Kurduwadi					
Iron Foundry (M.T.)	100	86	68	62	75

Bhopal There is no activity other than Mid Life Rehab. of coaches at Bhopal. Coil Spring manufacture in RSK, Sithouli.

Bhusawal There is no major other activity except POH of Electric Locomotives and supporting activities.

Kurla There is no other activity except POH/NPOH of 4 wheeler Tank wagons and its supporting activities.

Eastern Railway

Liluah The other activities are supporting activities in respect of POH of Coaches wagons.

Kinchrapara Supporting activities in respect of POH of Elect. loco & EMUs.

Jamalpur The manufacture of 20 T Diesel Crane (till date 12 Nos.) 140 T Diesel Crane (assembled till date 12 Nos.) The position of other activities is as below :—

	1994-95		1995-96		1996-97 (Upto Dec.)	
Activities	Target	Out turn	Target	Out turn	Target	Out turn
Rebuilding of BOX Wagon	600	595	720	641	405	326
Manufacture of Tower Wagon	18	18	24	24	9	9
Manufacture of Container Flat	300	247	360	337	—	—
Manufacture of UIC Bogies	240	165	360	135	180	204
Manufacture of Brake Blocks	960000	955310	1080000	995200	900000	783480

Northern Railway

Workshops	Activities	1993-94		1994-95		1995-96	
		Target	Outturn	Target	Outturn	Target	Outturn
Jagdhari	Conversion 24 V to 110 V	40	39	60	60	150	148
	Air brake retrofitment	7	—	28	55	—	21
	Unloadable Box converted to BOX/KH for 150 container		21	300	192	420	282
	Supply of wheels		13402	11868	12772	11868	13505
	Repair of LB		41952		39600		33069
Alambagh	Conversion from 24 V to 110 V		39		82	300	88
	Supply of wheels	1152	965	1152	1226	1152	722
	Conversion to NMG coach		19		11		70
	Air brake retrofitment	6	—	28	57	—	33
	Coach conversion	24	24	24	36	24	14
	Repair of L.B. springs		11316		7596		4924
Charbag	Repair of wheel (C&W)	4500	4476	2600	2604	2600	2178
	Repair of wheel (L)	600	573	600	596	600	576
	Unloadable Box wagons made loadable		258		68		01

Workshops	Activities	1993-94 Target	1993-94 Outturn	1994-95 Target	1994-95 Outturn	1995-96 Target	1995-96 Outturn
			SUPPLY				
	Brake block DSL.		280		445		333
	Brake Block BOX		154935		121814		110309
	Brake Block IEF		31084		28884		28548
Amritsar	Manu. of BVZC Wagon	250	252	400	400	400	400
	Manu. of UIC Bogies	500	500	200	217	200	200
	Repair of UIC Bogies		—		139	200	216
	Manufacture of BRN wagons	80	80	—	—	—	—
Jodhpur							
	NG Coach Construction.	12	12	12	6	12	5
	NG Wagon Const.	8	9	8	2	8	—
Bikaner							
	Conversion to NMG Coach		9	50	47	50	48
	Repair of LB Springs		2964		1650	—	—
	Repair of wheel sets		5520		3912		2760
	Manufacture of Brake Blocks	37800	27367	37800	32702	37800	28085

Workshops Activities	1993-94 Target	1993-94 Outturn	1994-95 Target	1994-95 Outturn	1995-96 Target	1995-96 Outturn
Kalka (Supply position)						
Rear Cover		2414		4097		3968
Front Cover		1661		1772		1870
Adjusting Piece		NWO		NWO		3158
Class Frame 380X455 MM		NWO		NWO		2651
B Block ICF		150000		271750		132124
B Block N.G.		8500		7600		6700
Brake Gear Pin No. 1		10000		11300		12800
Brake Gear Pin No. 2		68000		11500		12800
North Eastern Railway Gorakhpur						
Iron Foundry (M.T.)	130	138	130	120	130	130
Brass Foundry (M.T.)	27	15.36	6	9.5	6	4.88
Smithy (M.T.)	270	306	267	270.65	267	208.2
Machine Shop (M. Hrs.)	17550	18834	17550	18188	17550	19072
Repairs wheels PRS/Yr.	7375	8036	6400	6099	6200	4554
Fabrication of components/Yr.	67500	67416	67500	61914	67500	64070
Conversion of vac. brake to air brake coaches			36/Yr.	42	36	24
Conversion of 24 volt to 110 volt light system	60/Yr.	39	70	64	100	78

Workshops Activities	1994-95 Target	1994-95 Outturn	1995-96 Target	1995-96 Outturn	1996-97 Target	1996-97 Outturn
Izzatnagar						
Regular Work						
Iron Foundry (M.T.)	73	66	73	67	73	75
Steel Foundry (M.T.)	12.0	10.6	7.8	5.4	7.8	Nil ROOT Blower and Cupola under repair.
Smithy (M.T.) 180	156	180	155	150	150	
Machine Shop 8765 (Man Hours)	6799	8765	8038	9765	6868	
Fabrication (Man Hours)	4152	3232	4152	3680	4152	4120
Repair of Wheels (Prs. per Year)	6696	6696	6048	6048	6288	5240
M.G. Rail Bus	—	—	2/Yr.	2	2	2. Under Progress
Rail Motor Trolley	5/Yr.	3	5/Yr.	1	5/Yr.	4
Quick Coupling	—	—	360/Yr.	350	1800/Yr.	2000
Samastipur						
Manufacture of BOXN wagons Units	96=240 Units	110=275 Units	120=300 Units	131=327.5 Units	180=450 Units	144=360

Northeast Frontier Railway

	1994-95		1995-96		1996-97 (upto Dec. 96)	
	Target	Actual	Target	Actual	Target	Actual
New Bongaigaon						
Corrosion repair of coaches (FWU) (M.G.)	168	64	168	64	126	64
(B.G.)	168	226	168	298	126	182
Spring repair (EWS)	8868	2957	6156	3244	3993	2962
Wheel (Pairs)	8988	4437	8588	4292	6741	3214
Forging (M.T.)	372	210	372	260	280	362
Remetalling (Nos.)	24720	26883	12939	10003	6120	6039
Dibrugarh						
Spring (EWS)	5456	2360	2738	2330	1521.12	774
Wheel (Pairs)	3654	2564	3360	2313	2520	1429
Forging (M.T.)	446.4	184.5	446.4	89.82	334.8	35
Foundry (M.T.) Ferrous	840	329	840	251	630	188
Non-Ferrous	144	48.4	144	28.1	108	14.47
Remetalling (Nos.)	7200	1227.6	7200	2821	5400	1360
Tindharia						
Spring repair (EWS)	As per reqt.	4.014	As per reqt.	4.701	As per reqt.	4.108

Railway/ Workshop/ Activities	1994-95		1995-96		1996-97 (upto Dec. 96)	
	Target	Actual	Target	Actual	Target	Actual
Forging (M.T.)	As per reqt.	16.49	As per reqt.	10.48	As per reqt.	7.44
Foundry (M.T.) Ferrous	"	3.198	"	3.198	"	3.198
Non-Ferrous	"	1.625	"	2.707	"	159.816
Southern Railway						
Perambur Loco						
Recabling (Loco)	18	14(5PRC)	18	15(1PRC)	12	5(4PRC)
Special Repair (Loco)	5	4	3	3	3	3
6 P Conversion (Loco)	20	20.04	20	20.04	20	20.04
Traction Motor Armature rewind (Nos.)	72	70	96	55	72	52
Recondtioning of T.M. (Nos.)	240	170	240	210	180	138
Rewinding of Auxiliaries (Nos.)	200	127	240	161	144	112
Fuel brake conversion (loco)	5	7	10	4	10	6
Corrosion repair of BEML coaches	30	30	30	18	30	2
UIC BG bogie manufacture (Nos.)	264	264	264	222	264	115

Railway/ Workshop/ Activities	1994-95		1995-96		1996-97 (upto Dec. 96)	
	Target	Actual	Target	Actual	Target	Actual
ICF BG bogie manufacture (Nos.)	48	32	48	22	48	8
Iron Foundry (Br. Blk.)	362040	353776	298440	317690	309600	253705
Smithy (M.T.)	936	834	936	700	936	513
Whiting Jack (Nos.)	88	70	88	60	88	61
Travelling Steam Crane ART (Nos.)	1.25	4	1.25	3	1.25	—
Travelling Diesel Crane ART (Nos.)	0.40	1	0.40	—	0.40	—
Perambur (C&W)						
Wheels (Sets)		2719		2060		1381
Springs (Nos.)		17657		19214		14297
Supply of EMU/TC wheels		288		994		761
Supply of EMU/MC wheels		—		271		69
Mysore						
MG coach construction	10	7	12	7	6	3
Corrosion repair to BG coaches	240	14	96	140	96	156
Out station orders (Man Hours)	308520	402240	312000	310113	402864	296927
Store Works (Orders) (Man Hours)	409800	312212	378000	328323	378000	271890

Railway/ Workshop/ Activities	1994-95		1995-96		1996-97 (upto Dec. 96)	
	Target	Actual	Target	Actual	Target	Actual
UIC bogie manufacture	420	350	—	—	—	—
Toy Train (Set)	—	—	1	2	1	1
Conversion of/ POH-YRD (coaches)	—	—	2	2	2	2
Conversion of BG coaches in BD-ART	—	—	—	—	1.2	2
Golden Rock						
DSL Loco Armature coil Manufacturing (Units)	333	416	378	456	283.5	363
DLS Cylinder Liner Plating	12000	12050	12000	11500	9000	7935
DSL Heavy Elec. Repair	333	400	378	444	283.5	345
Engine Block Reclamation	81	81	91	91	54	60
DSL Loco Special repair	12	18	12	12	9	16
Coach construction	8.4	16	1	19	13.5	8
ICF coach corrosion repair	168	145	144	141	98	109
Wagon Construction	600	497.5	700	617	600	127.5
EME Corrosion Repair	12	12	12	12	9	11
Foundry shop Brake Block Mfg.	3664	3567	3140	3254	2337	2492

Railway/ Workshop/ Activities	1994-95 Target	1994-95 Actual	1995-96 Target	1995-96 Actual	1996-97 (upto Dec. 96) Target	1996-97 (upto Dec. 96) Actual
Forge £ Smithy Shop						
(a) Spring Repair	7800	6613	7800	8328	5850	5724
(b) Forgings	1536	1059	1536	1063	1152	831
South Central Railway						
Lallaguda						
Smithy (MTs)	265	588	265	536	265	434.5
Iron Foundary (MTs)	2690	2182	2690	1961	2690	1900
White Metal (MTs)	14.5	1.8	—	2	—	—
Brake Block Mfg.	180000	141593	175200	37774	180000	113300
Repairs to LB Spring	17700	6163	17700	6245	16800	5339
Supplies to Divisions (Wheels/Springs etc.)	9500	7869	9660	7864	9620	6319
Conversion to 110 Volts.	—	30	—	100	—	91
PVC flooring Full Coach	—	15	16	16	—	16
SS Inlays	—	Nil	—	Nil	—	28
Hubli						

	1994-95 Actuals	1995-96 Actuals	1996-97 (upto Jan.' 97) Actuals
Co-Co	—	10	33
UIC	651	620	303
ICF	584	78 (RCF cancelled orders)	510
Bolster ICF	440	—	64

Workshop/ Activities	94-95 Target	94-95 Actual	95-96 Target	95-96 Actual	96-97 (Jan.) Target	96-97 (Jan.) Actual
Guntupalli						
ISO Container Flats	—	189	—	254	—	212
Quick Coupling device for Pressure gauge in BVs.	—	—	—	80	—	69
No. of Wheels repaired	20500	22320	20500	22496	20500	19703
No. of LB springs repaired	28350	20521	28350	11980	28350	12129
No. of white metal bearings repaired	29160	4007	—	2315	—	488
Tirupathi						
	94-95		95-96		96-97 (Upto Dec. '97)	
Wheels (a) POH	1727		1744		1444	
(b) Others	295		585		424	
	2022		2329		1868	
Conversion of 24V to 110 Volts	38		54		39	
PVC Floorings (Full coach)	10		12		2	
Head Stock Pressings	Nil		390		40	
Centre stiffness	Nil		100		Nil	
EMU Coaches Z section for ICF	Nil		735		44	
Longitudanal Beams (Sole Bars)	Nil		21		202	

	1994-95		1995-96		1996-97 (up to Dec., 96)	
	Target	Actual	Target	Actual	Target	Actual
Nagpur N.G.						
Brake Block (Nos.)	108000	113068	108000	101965	135000	135000
Kharagpur						
Brake Block (Nos.)	300000	333871	300000	311200	225000	225000

Raipur The items manufactured in the workshops are for the POH/Repair activities.

Mancheswar - do -

Western Railway

	93-94		94-95		95-96	
	Target	Actual	Target	Actual	Target	Actual
Parel						
Supply of Wheels to Divn.	185	185	185	110	185	97
Dahod						
Rehab. of Cat. 'C' BOX wagons (in VUs)	20	20	20	20	30	23
Conv. to container flats (in VUs)	Nil	Nil	Nil	.5	20	13.5
Supply of wheels to Divn.	449	368	449	350	449	405
- do - springs	1450	1412	1450	1682	1450	1614
- do - b/blocks to Divn. (in thousands)	35	34.4	35	35.2	40	40.8
Kota						
Conv. container flats (in VUs)	Nil	1.5	25	16.5	35	27
Supply of wheels to Divn.	347	249	347	274	347	270

	1993-94		1994-95		1995-96	
	Target	Actual	Target	Actual	Target	Actual
Supply of springs - do -	570	407	570	320	570	416
- do - b/blocks - do - (in thousands)	11	11.8	11	11.8	11	12.4
Ajmer (Loco)						
Supply of b/blocks to divn. (in thousands)	29	27.2	29	22.9	29	17.2

Junagarh There are no major other activities except POH of MG wagons and supporting activities.

Bhavnagar There are no major other activities except POH of MG coaches and its supporting activities.

Ajmer (C&W) There are no other major activities except POH of BG/MG coaches, MG wagons and supporting activities.

Pratapnagar There are no other major activities except POH/ ROH of Tank Wagons and its supporting activities.

43. The Railways have a crucial role to play in the sustained development of the economy by providing the transport infrastructure. The change in economic scenario and rapid acceleration in the pace of the nation's economic growth have confronted the Railways with the toughest challenge in their history. The Committee feel that the Railways would have to respond to the changing environment by making the necessary competitive adjustments to deal with the pressure of market forces in a liberalised economic environment not only in order to remain financially viable but also to be able to satisfy the growth of a vibrant economy. Under these circumstances modernisation, upgradation and expansion of the rail transport system and especially proper maintenance including preventive maintenance of their rolling stock becomes very vital and more so a necessity.

44. The Committee note that at present the Indian Railways have 44 maintenance workshops engaged in maintenance of locomotives, carriages and wagons. Periodic overhauling (POH) of all kinds of locos, coaches, wagons, EMUs, DMUs, etc. at a specified periodicity is undertaken in these workshops. Some of these workshops are also manufacturing various components required for rolling stock maintenance in the field units.

The Committee also find that besides these maintenance workshops, there are some other type of workshops in the Railways such as Civil Engineering Workshops at Allahabad, Jhansi, etc.; Signalling Workshops at Podanur, Gorakhpur, Byculla, etc., and others at Sithouli, Pandu and Baghdogra. The Committee are concerned to note that the Ministry of Railways did not provide any information relating to the background and the activities of these workshops. The Committee desire that the complete details of these workshops including their targets and achievements (activity-wise) for the last three years should be furnished to them expeditiously.

45. The Committee find that there have been huge cost and time overruns during the implementation of Phase-I and Phase-II modernization projects of Railways workshops. Even during implementation of Phase-III modernization project of 12 Railway workshops, modernization of workshops at Jamalpur, Perambur, Jhansi, Kota and Alambagh, which was earlier sanctioned in the years 1989-90, 1990-91 and 1992-93 was reviewed and approved at the reduced cost in the year 1995-96. The Committee are constrained

to take note of the ad-hocism and half-hearted approach of the Ministry of Railways in finalizing and implementing the modernization projects of these workshops. The Committee cannot but conclude that the modernization of these workshops was taken up without proper in-depth study, perspective planning and even without anticipating their distinct near future requirements. The Committee therefore desire to have the full details of the expenditure incurred on the modernization of these five workshops during the period from 1989-90/1990-91/1992-93 till the modernization was reviewed in 1995-96. The Committee also desire to fix the responsibility for reducing the allocations for modernization and not spending the amount in full.

46. The workstation layouts, machinery and plant layouts, work process effectiveness, availability of proper tools, fixtures and material handling system play a very significant role for optimisation and improvement in quality of POH, repair cycle time and productivity of the workshops. The Committee therefore recommend that a proper and intensive study by the specialised Agencies/Institutions in the relevant fields in consultation with the Central Organisation for Modernisation of Workshops should be conducted at the earliest in order to effect further improvement in the working of the workshops.

47. The Committee during their study tours to some of the workshops have found that there is lot of scope for improvement in the internal working of these workshops. Keeping in view major changes in the technological field, the Committee feel that extension of computerization coverage to all important workshops would be of much help in order to make further improvement in the major areas of the workshops internal working such as production planning and control, manpower and material planning and procurement, rolling stock maintenance, machinery and plant maintenance and management information system for getting optimum productivity.

48. The Committee have also found that working conditions in some of the workshops are very pathetic and hazardous to the health of the workers. The Committee strongly recommend that conscientious efforts be made to improve the prevalent conditions.

49. The Committee are of the view that existing infrastructural facilities in the workshops need to be revamped or augmented. In some cases creation of new facilities should be considered seriously so that smoke emission and sewage discharge standards should conform to new environmental requirements.

50. The Committee also desire that a new or updated cost counting system for repair of rolling stock undertaken in workshops

should be introduced so that the cost of products are maintained more accurately. It would also provide the required feedback for taking corrective steps. At the same time emphasis should also be given on periodic quality audits in order to improve quality during manufacturing and repair operations.

51. The Committee find that albeit there is a decline in the increased failures of Coaches, Diesel and Electric Locos and Wagon detachments in the year 1995-96 compared to 1991-92, the figures relating to failures and detachments for the year 1995-96 given by the Ministry of Railways are glaring. The Committee are of the considered opinion that induction of (i) new equipments for measuring, recording and analysing the wheel set parameters like profiles, dimensions, acoustics, etc.; (ii) other upgraded with the latest technology or new measuring systems for bearings; (iii) microprocessor based ultrasonic testing and recording machines; and (iv) spring and shock absorber testing machines for improving the effectiveness and reliability of the tests and providing easier analysis for corrective action should be considered seriously.

52. Keeping in view the rapid increase in rolling stock and arrears of periodic overhauling of locos/coaches/wagons/OCVs, etc. the Committee feel that the need for more workshops in the Railways should be examined seriously. The Ministry of Railways during evidence informed the Committee that since the POH of steam locomotives etc. has almost disappeared, they did not really have any shortage of workshops. The Ministry of Railways have also undertaken region-wise and Railway-wise re-appraisal of their requirements. The Committee desire to know the outcome of the re-appraisal, if completed, with specific comments of the Ministry.

53. The Committee find that besides POH a number of other activities are also undertaken in these workshops which *inter-alia* include repairs to wheels, leaf springs, bearing shells, manufacture of leaf springs, UIC bogies, wagon components, diesel locos components, Brake Blocks, LB springs, repairs to coaches and bogies, supply of wheels, etc. The Committee note that in most of the cases the targets fixed for repairs and manufacture/supply of different items were not achieved. In some of the cases, no targets were even fixed. The Committee desire to know the reasons for not achieving the targets in spite of the fact that these workshops are having surplus capacity/manpower.

54. The Committee find that there are a number of vacancies running into hundreds in different categories in almost all the workshops, particularly in Parel, Matunga, Jhansi, Kanchrapara, Jamalpur, Liluah, Jagadhari, Alambagh, Charbagh, Amritsar, Jodhpur, Gorakhpur, Izatnagar, New Bongaigaon, Perambur (C&W), Golden

Rock, Lalaguda, Hubli, Kharagpur, Raipur, Lower Parel & Mahalaxmi, Dahod and Ajmer workshops. As the grade-wise and category-wise position of vacancies available in various workshops, as desired by the Committee, was not furnished by the Ministry, the Committee have not been able to analyse and assess the impact of these vacancies on the functioning of the workshops. The Committee desire to know the basic reasons workshop-wise as to why and how vacancies in such a large number have occurred. The number of vacancies in Technical/Mechanical grades; the date since when these vacancies have been lying unfilled and the steps taken to fill up these vacancies, etc. should also be intimated to the Committee at the earliest.

55. The Committee feel so much concerned about the prevailing situation in the workshops that they have decided to form a Sub-Committee to study the working of these workshops.

56. A Central Organisation for Modernisation of Workshops (COFMOW) was set up in 1979 with the main objectives of procurement of high technology machines with better productivity in order to replace old, obsolete and less productive machines in railway Workshops and other maintenance facilities and preparation of project reports for modernisation. The Committee, however, find that COFMOW is also handling the procurement of machinery and plant for manufacturing of 8000 HP ABB technology, 3-Phase locomotives to be built at CLW and has extended its role of procurement of machinery and plant and other equipments for other Ministries too. Keeping in view the manifold increase in COFMOW activities and its jurisdiction and results of its existence, the Committee are of the view that in order to enhance the working efficiency, upgradation of the status of COFMOW into a quasi-permanent organisation be considered seriously.

57. The Committee during evidence in connection with examination of Demands for Grants of the Ministry of Railways for the year 1997-98 was informed by the Ministry that they had proposed to manufacture wagons at Jamalpur workshop and serious discussions were on at the Board level. However, the Committee find that presently only re-building of wagons is being done in the workshop. The Committee desire that the possibility of manufacturing new wagons at the Jamalpur workshop should be explored seriously.

NEW DELHI;
23 October, 1997
1 Kartika, 1919 *(Saka)*

BASUDEB ACHARIA,
Chairman,
Standing Committee on Railways.

PART II

MINUTES OF THE FIRST SITTING OF THE STUDY GROUP-IV (WORKSHOPS, UNDERTAKINGS & PRODUCTION UNITS) OF STANDING COMMITTEE ON RAILWAYS (1996-97)

The Study Group-IV (Workshops, Undertakings & Production Units) of Standing Committee on Railways (1996-97) sat on Wednesday, the 16th October 1996 from 1100 hours, to 1210 hours, in Committee Room '62', Parliament House.

PRESENT

Shri S. Bangarappa — *Convenor*

2. Shri K. Parasuraman
3. Shri Imchalemba
4. Shri Ashok Gehlot

SECRETARIAT

Smt. Roli Srivastava — *Joint Secretary*

Shri O.P. Shokeen — *Committee Officer*

2. At the outset the Convener welcomed the Members to the first sitting of the Group. He briefed the Members about the subjects to be examined by the Group.

3. Thereafter, the Group delibrated on the future programme of work. It was decided that the background/preliminary material on Workshop, Undertakings and Production Units of Indian Railways may be called for from the Ministry of Railways and circulated to the Members of the Group as early as possible. It was also decided to hold the next sitting of the Group on 31st October 1996 from 1100 hrs. onwards to have further discussions on future programme of work.

4. The Convener also desired that the following paper may be circulated to the Members of the Group for their information :—

(i) Brief information regarding functions etc. of the Study Groups.

(ii) 18th Report of the Standing Committee on Railways (1995-96) on Action Taken by the Ministry of Railways on the recommendations/observations contained in the 12th Report or 'Production Units of Indian Railways'.

The Study Group IV then adjourned.

MINUTES OF THE SECOND SITTING OF THE STUDY GROUP-IV (WORKSHOPS, UNDERTAKINGS & PRODUCTION UNITS) OF STANDING COMMITTEE ON RAILWAYS (1996-97)

The Study Group-IV (Workshops, Undertakings & Production Units) of Standing Committee on Railways (1996-97) sat on Thursday, the 31st October 1996 from 1100 hours, to 1230 hours, in Committee Room 'E', Parliament House Annexe.

PRESENT

Shri S. Bangarappa — *Convenor*

2. Shri K.M. Saifullah

3. Shri K. Parasuraman

SECRETARIAT

Smt. Roli Srivastava — *Joint Secretary*

Shri R.C. Gupta — *Deputy Secretary*

Shri O.P. Shokeen — *Committee Officer*

The Convener welcomed the Members of the Group to the sitting. The Group examined the preliminary material received from the Ministry of Railways on the subjects related to the Group. The Group decided to take-up the examination of the subject—Modernisation and capacity utilisation of workshops and need for more workshops in Railways. It was also decided that list of points on the subject be prepared and sent to the Ministry of Railways for their replies.

2. The Group also decided to undertake on-the-spot study tour of Madras, Bangalore, Hubli, Goa and Mangalore.

The Study Group IV then adjourned.

MINUTES OF THE THIRD SITTING OF THE STUDY GROUP-IV (WORKSHOPS, UNDERTAKINGS & PRODUCTION UNITS) OF STANDING COMMITTEE ON RAILWAYS (1996-97)

The Study Group-IV (Workshops, Undertakings & Production Units) of Standing Committee on Railways (1996-97) sat on Monday, the 13th January 1997 from 1500 hours. to 1600 hours. in Committee Room 'B', Parliament House Annexe.

PRESENT

Shri S. Bangarappa — *Convenor*

2. Shri K.M. Saifullah

3. Shri K. Parasuraman

4. Shri S. Niraikulathan

5. Shri Ashok Gehlot

SECRETARIAT

Smt. Roli Srivastava — *Joint Secretary*

Shri O.P. Shokeen — *Committee Officer*

2. At the outset, the Convenor welcomed the Members to the sitting of the Study Group. Thereafter, the Group considered the material received from the Ministry of Railways on the subject—'Modernisation and Capacity Utilisation of Workshops and need for more Workshops in Railways'. The Group decided to seek further clarification from the Ministry of Railways on certain points on the subject.

The Study Group then adjourned.

MINUTES OF TWENTY-SEVENTH SITTING OF THE STANDING COMMITTEE ON RAILWAYS (1996-97)

The Committee sat on Friday, the 16th May, 1997 from 1500 hrs. to 1600 hrs. in Committee Room 'B', Parliament House Annexe, New Delhi.

PRESENT

Shri Basudeb Acharia — *Chairman*

MEMBERS

Lok Sabha

2. Shri Jagdambi Prasad Yadav
3. Shri Satya Deo Singh
4. Dr. Ramvilas Vedanti
5. Shri K. Parasuraman

Rajya Sabha

6. Dr. (Smt.) Chandrakala Pandey
7. Maulana Habibur Rehman Nomani

SECRETARIAT

1.	Shri R.C. Gupta	—	*Deputy Secretary*
2.	Smt. Anita Jain	—	*Under Secretary*
3.	Shri O.P. Shokeen	—	*Committee Officer*

The Committee decided to take up the three more subjects (i) 'Modernisation & capacity utilisation of workshops and need for more workshops in Railways' and (ii) ** **; (iii) ** * for detailed examination. The Committee further decided to have oral evidence of the representatives of the Ministry of Railways on the subjects (i) 'Modernisation & capacity Utilisation of Workshops and (ii) * * on 02.06.1997.

2. ** ** ** **

The Committee then adjourned.

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*Relate to other matters.

MINUTES OF THE TWENTY-EIGHTH SITTING OF THE STANDING COMMITTEE ON RAILWAYS (1996-97)

The Committee sat on Monday, the 2nd June, 1997 from 1500 hrs. to 1730 hrs. in Committee Room 'D', Parliament House, Annexe New Delhi.

PRESENT

Shri Basudeb Acharia — *Chairman*

MEMBERS

Lok Sabha

2. Shri Ram Naik
3. Shri Jagdambi Prasad Yadav
4. Shri Satya Deo Singh
5. Dr. Ramvilas Vedanti
6. Shri Priya Ranjan Das Munsi
7. Shri Nandi Yellaiah
8. Shri K.P. Singh Deo
9. Shri Chun Chun Prasad Yadav
10. Shri Raja Rangappa Naik
11. Shri P. Theertharaman
12. Shri Ram Singh Shakya
13. Shri K.P. Naidu
14. Shri Narayan G. Athawalay
15. Shri Sukhlal Khushwaha
16. Dr. Prabin Chandra Sarma
17. Shri E. Ahamed
18. Shri S. Bangarappa

Rajya Sabha

19. Shri Satyanarayana Dronamraju
20. Shri Wasim Ahmad
21. Shri Balbir Singh
22. Shri Shivajirao Giridhar Patil
23. Smt. Malti Sharma
24. Shri Nagmani
25. Shri Rahas Bihari Barik
26. Dr. (Smt.) Chandrakala Pandey
27. Maulana Habibur Rahman Nomani

SECRETARIAT

1. Shri R.C. Gupta — *Deputy Secretary*
2. Shri O.P. Shokeen — *Committee Officer*

WITNESSES

1.	Shri M. Ravindra	Chairman, Railway Board & Ex-Officio Principal Secretary to the Government of India.
2.	Shri V. Sivakumaran	Financial Commissioner (Railways) & Ex-Officio Secretary to the Government of India.
3.	Shri L.K. Sinha	Member Mechanical & Ex-Officio Secretary to the Government of India.
4.	Shri Shanti Narain	Member Traffic & Ex-Officio Secretary to the Government of India.
5.	Shri S.K. Khanna	Member Electrical & Ex-Officio Secretary to the Government of India.

2. At the outset the Committee congratulated Shri M. Ravindra on his elevation to the post of Chairman, Railway Board. Thereafter, the Committee took the evidence of the representatives of the Ministry of Railways on the subject—'Modernisation & Capacity Utilisation and need for more Workshops in Railways'.

3. The Committee decided to take further evidence on the subject.

4. The verbatim record of the proceeding has been kept.

The Committee then adjourned.

MINUTES OF THE THIRTY-FIRST SITTING OF THE STANDING COMMITTEE ON RAILWAYS (1996-97)

The Committee sat on Wednesday, the 25th June, 1997 from 1100 hrs. to 1240 hrs. in Committee Room 'C', Parliament House Annexe.

PRESENT

Shri Basudeb Acharia — *Chairman*

Lok Sabha

2. Shri Ram Naik
3. Shri Jagdambi Prasad Yadav
4. Shri Satya Deo Singh
5. Shri Anand Ratna Maurya
6. Dr. Ramvilas Vedanti
7. Shri Ashok Gehlot
8. Shri Nandi Yellaiah
9. Shri K.P. Singh Deo
10. Km. Sushila Tiriya
11. Shri Chun Chun Prasad Yadav
12. Shri Raja Rangappa Naik
13. Shri P. Theertharaman
14. Shri Ram Singh Shakya
15. Shri K. Parasuraman
16. Shri K.P. Naidu
17. Shri Narayan G. Athawalay
18. Shri Dinsha J. Patel

Rajya Sabha

19. Shri Satyanarayana Dronamraju
20. Shri Wasim Ahmad

21. Shri W. Angou Singh
22. Shri Gopalsinh G. Solanki
23. Smt. Malti Sharma
24. Dr. (Smt.) Chandrakala Pandey
25. Shri S. Niraikulathan
26. Shri K.M. Saifullah
27. Maulana Habibur Rahman Nomani

SECRETARIAT

1.	Shri R.C. Gupta	—	*Deputy Secretary*
2.	Smt. Anita Jain	—	*Under Secretary*

WITNESSES

1. Shri M. Ravindra	Chairman, Railway Board & Ex-Officio Principal Secretary to the Government of India.
2. Shri V. Sivakumaran	Financial Commissioner (Railways) & Ex-Officio Secretary to the Government of India.
3. Shri L.K. Sinha	Member, Mechanical & Ex-Officio Secretary to the Government of India.
4. Shri V.K. Agarwal	Member, Staff & Ex-Officio Secretary to the Government of India.
5. Shri Shanti Narain	Member, Traffic & Ex-Officio Secretary to the Government of India.
6. Shri S.K. Khanna	Member, Electrical & Ex-Officio Secretary to the Government of India.

2. The Committee took further evidence of the representatives of the Ministry of Railways on the subject 'Modernisation and Capacity Utilisation and need for more workshops in Railways'. The representatives of the Ministry clarified the various points raised by the Committee relating to the subject.

3. A verbatim record of the proceedings has been kept.

The Committee then adjourned.

MINUTES OF THE EIGHTH SITTING OF THE STANDING COMMITTEE ON RAILWAYS (1997-98)

The Committee sat on Thursday, 23 October, 1997 from 1500 hrs. to 1700 hrs. in Committee Room '53', Parliament House, New Delhi.

PRESENT

Shri Basudeb Acharia — *Chairman*

MEMBERS

Lok Sabha

2. Shri Ram Naik
3. Shri Jagdambi Prasad Yadav
4. Shri Satya Deo Singh
5. Dr. Sahebrao S. Bagul
6. Dr. Ramvilas Vedanti
7. Shri Ashok Gehlot
8. Shri Priya Ranjan Das Munsi
9. Shri Nandi Yellaiah
10. Shri K.P. Singh Deo
11. Shri Imchalemba
12. Shri V.M. Sudheeran
13. Shri Chun Chun Prasad Yadav
14. Shri P. Theertharaman
15. Shri Ram Singh Shakya
16. Shri K. Parasuraman
17. Shri Kondapalli Pydithalli Naidu
18. Shri Narayan Gajanan Athawalay
19. Dr. Prabin Chandra Sarma

Rajya Sabha

20. Maulana Habibur Rahman Nomani
21. Shri Balbir Singh
22. Shri W. Angou Singh
23. Smt. Malti Sharma
24. Shri Nagmani
25. Smt. Chandrakala Pandey
26. Shri S. Niraikulathan
27. Shri K.M. Saifullah

SECRETARIAT

1. Shri John Joseph — *Joint Secretary*
2. Shri R.C. Gupta — *Deputy Secretary*
3. Shri Surinder N. Dargan — *Under Secretary*

The Committee took up for consideration the draft Fourteenth Report on 'Modernisation and Capacity Utilisation of Workshops in Indian Railways'.

2. The Committee adopted the Report with certain modification/ amendments as shown in the Annexure.

3. The Committee authorised the Chairman to finalise the Report after making consequential changes, if any, arising out of factual verification by the Ministry of Railways or otherwise and to present the same to both the Houses of Parliament.

4. The Committee also decided to postpone their Study tour scheduled to be undertaken in the last week of October 1997 to Calcutta and Guwahati.

The Committee then adjourned.

Amendments/Modifications made by Standing Committee on Railways in the Draft Report on 'Modernization and Capacity Utilization of Workshops in Indian Railways'

S. No.	Page No.	Para No.	Line	
1	2	3	4	
01	56	43	15	*After* 'maintenance' *Add* 'including preventive maintenance'
02	57	44	05	*After* 'EMUs' *Add* 'DMUs'
03	58	For Paragraph No. 45	—	*Substitute* 'The Committee find that there have been huge cost and time overruns during the implementation of Phase-I and Phase-II modernization projects of Railways workshops. Even during implementation of Phase-III modernization project of 12 Railway workshops, modernization of workshops at Jamalpur, Perambur, Jhansi, Kota and Alambagh, which was earlier sanctioned in the year 1989-90, 1990-91 and 1992-93 was reviewed and approved at the reduced cost in the year 1995-96. The Committee are constrained to take note of the ad-hocism and half-hearted approach of the Ministry of Railways in finalizing and implementing the modernization projects of these workshops. The

1	2	3	4	
				Committee cannot but conclude that the modernization of these workshops was taken up without proper in-depth study, perspective planning and even without anticipating their distinct near future requirements. The Committee therefore desire to have the full details of the expenditure incurred on the modernization of these five workshops during the period from 1989-90/1990-91/1992-93 till the modernization was reviewed in 1995-96. The Committee also desire to fix the responsibility for reducing the allocations for modernization and not spending the amount in full'.
04	60	47	10	*After* 'control' *Add* 'manpower and'
05	62	For Paragraph No. 51	—	*Substitute* 'The Committee find that albeit there is a decline in the increased failures of coaches, Diesel and Electric Locos and wagon detachments in the year 1995-96 compared to 1991-92, the figures relating to failures and detachments for the year 1995-96 given by the Ministry of Railways are glaring. The Committee are of the considered opinion that induction of (i) new equipments for measuring, recording and analysing the wheel set parameters like profiles, dimensions, acoustics, etc. (ii) other upgraded with the latest technology or new measuring systems for bearings;

1	2	3	4	
				(iii) microprocessor based ultrasonic testing and recording machines; and (iv) spring and shock absorber testing machines for improving the effectiveness and reliability of the tests and providing easier analysis for corrective action should be considered seriously'.
06	65	—	—	*Add* the following new paragraph after paragraph No. 54. 'The Committee feel so much concerned about the prevailing situation in the workshops that they have decided to form a Sub-Committee to study the working of these workshops'. The number of subsequent paragraphs be changed accordingly.
07	66	—	—	*Add* the following new paragraph after paragraph No. 55. 'The Committee during evidence in connection with examination of Demands for Grants of the Ministry of Railways for the year 1997-98 was informed by the Ministry that they had proposed to manufacture wagons at Jamalpur workshop and serious discussions were on at the Board level. However, the Committee find that presently only re-building of wagons is being done in the workshop. The Committee desire that the possibility of mnufacturing new wagons at the Jamalpur workshop should be explored seriously'.