



EAST CENTRAL RAILWAY

WORK STUDY REPORT  
ON

To assess the utility of Mechanical Workshop of  
Mechanical Department of Samastipur.

EFFICIENCY CELL  
EAST CENTRAL RAILWAY  
HAJIPUR

STUDY NO. ECR/EFF./WSR/SPJ/20-21/13

**REVIEW  
OF  
STAFF STRENGTH  
OF  
MECHANICAL WORKSHOP  
OF  
MECHANICAL DEPARTMENT  
OF  
SAMASTIPUR**

**(ECR/Eff/WSR/SPJ/20-21/13)**

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**WORK-STUDY CELL  
East Central Railway  
HAJIPUR**

## EXECUTIVE SUMMARY

<b>Study No.</b>	<b>ECR/Eff/WSR/SPJ/20-21/13</b>
<b>Subject</b>	<b>REVIEW OF STAFF STRENGTH OF MECHANICAL WORKSHOP OF MECHANICAL DEPARTMENT OF SAMASTIPUR.</b>
<b>Area</b>	<b>SAMASTIPUR</b>
<b>Division</b>	<b>SAMASTIPUR</b>
<b>Department</b>	<b>MECHANICAL</b>
<b>Terms of Reference</b>	<b>Assessment of Man Power requirement</b>
<b>Total No. of Recommendations</b>	<b>01</b>
<b>No. of posts recommended for surrender</b>	<b>01</b>
<b>Financial Implication</b>	<b>5.83 LAC</b>
<b>Month of Circulation</b>	<b>NOVEMBER 2020</b>

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## SYNOPSIS

Samastipur workshop was established in the year 1881 for intermediate overhauling of steam locomotives, P.O.H. of Coaches and wagons. This workshop belonged to Bengal North-Western Railway and subsequently merged in the state owned Oudh-Tirhut Railway on 1st April 1943. Later on, after formation of North-Eastern Railway, the I.O.H. of locomotives was stopped w.e.f. April 1962. This workshop was remodelled in the year 1962 at the cost of Rs.19.11 lacs. to undertake the manufacture of M.G. wagons. A new milestone was attained, when the first M.G. wagon was manufactured during 1962. After that this workshop was involved in the manufacturing of M.G. wagons of various designs along with other repair activities of M.G. wagons.

This workshop has the pride of having manufactured the specially designed M.G. wagon for the requirements of Defence i.e. transportation of heavy-duty tanks etc. For this purpose, 114 nos. of M.B.W.Z. type wagons were manufactured against two orders within a very limited time and at a reasonable cost.

Another turning point in the history of this workshop came into effect in July 1992 when Railway Board ordered to close the manufacture of M.G. wagons and placed an order to manufacture B.G. BOX'N' type wagons, for the first time. To commence the manufacture of B.G. BOX'N' wagons, it required the removal of M.G. track and laying of B.G. track including one diamond crossing inside workshop at an estimated cost of Rs.10.95 lakh.

Manufacturing of BOXN wagons @ 1 wagon per month started during February 1993 in addition to already existing activity of P.O.H. of M.G. wagons. P.O.H. of M.G. wagon activity was discontinued in June '96. Since then, this workshop was primarily engaged in the production of BOXN wagons. Rate of production of BOXN wagons has been stepped up year after year progressively to the level of 25 wagons per month. In June 2002, manufacture of new type of BOXN-HS wagon started in this workshop.

Railway Board has given order for manufacturing of Stainless Steel Wagon (BOXN-HL) in year 2007. 1st BOXN-HL wagon had been manufactured in the month of March 2009.

Expansion of the workshop to undertake "C" category unloadable wagon repair has been sanctioned vide P.B. No. 482'A' of 2006-07. Total cost as per detailed estimate is Rs. 32.02 Crores (Civil- 18.30, Mechanical-12.01, Electrical-1.56, Signal & Telecommunication -0.15 Crores). C-category repair of Unloadable BOXN wagons has been started since May 2012 and total 8603 no. wagons have been repaired upto Jan 2020.

Indian Railways is one of the biggest transportation organisation among all other transport organisation in the country. In fact the Railway is backbone of the country's transportation system. In the recent times, Railway is facing tremendous competition from road and air. In the time of competition ,transport system should not only be agile, prompt and amenable but also financially viable. In order to bring economy in expenditure the optimum utilization of man, machine and material will have to be ensured.

Indian Railways prime motto is to provide cheap and best transportation services to their users at a desired level of safety, security and punctuality. Being a large organization it plays a vital role in the Indian economy. These days, Indian economy is facing tough time, so it is the collective responsibility of every government organisation to keep close watch on their expenditure and check the expenditure accordingly.

The work study cell was assigned to conduct work study of Mechanical Workshop of Mechanical Department of Samastipur Division with a view to assess the staff requirement as per the existing workload.

Mechanical Department also plays a vital role in Indian Railways and leads in performance of any zonal Railway.

In Railways, the absorption of modernisation has been started and still in progress in every sphere of the system. These technological up gradation have shown considerable improvement in the efficiency and man power productivity in Railways.

## **TERMS OF REFERENCE**

The study has been conducted under the following terms of references:

- a. To review staff strength of Mechanical Workshop of Mechanical Department of Samastipur Division ,with a view to identify the surplus manpower in different units .
- b. To assess the effective utilization of Mechanical Workshop of Mechanical Department of Samastipur Division.

## **METHODOLOGY ADOPTED**

The work study team applied the following techniques for conducting the study :

- Discussion with CWM/SPJ
- Discussion with AWM/SPJ
- Discussion with APO/WS/SPJ
- Discussion with SSEs of all sections.
- Data collection and its analysis the factual status & existing work load.
- Reassessment of manpower requirement by applying need base.

## Chapter-I

### INTRODUCTION

- 1.1 Railway is one of the biggest transport organizations whose services are utilized by a large number of floating populations. Mechanical Department plays a vital role in maintaining safety & punctuality of trains. Actually Mechanical Department is the backbone of railway system.
- 1.2 Special emphasis is being given by the Ministry of Railways on safety & punctuality.
- 1.3 Keeping the above objects in mind and also giving priority to the Railway main motto is safety, security, punctuality, cleanliness and all the work of ministerial staff is computerised in particular this work study has been conducted to review the staff strength of Mechanical Workshop of Mechanical Department of Samastipur Division.



## **CHAPTER –II**

### **Existing Setup:-**

The actual staff strength of Mechanical Workshop of Mechanical Department of Samastipur Division is 343 against the sanctioned strength of 408 with vacancy of 65.

There are many sections of Mechanical Workshop/SPJ:-

<b>Sl. No.</b>	<b>Section</b>
<b>1.</b>	Underframe Section
<b>2.</b>	Body Fabrication Section
<b>3.</b>	Body Assembly Section
<b>4.</b>	Paint Section
<b>5.</b>	Machine Work Section
<b>6.</b>	Mill Wright Section
<b>7.</b>	PCO (Production Control Organization)
<b>8.</b>	Planning
<b>9.</b>	Progress-I
<b>10.</b>	Progress-II
<b>11.</b>	Inspection
<b>12.</b>	Drawing
<b>13.</b>	Store
<b>14.</b>	C-Category Section
<b>15.</b>	Mech.Ministerial, Mech.Personnel & Mech.Personnel (Other)

## **Sectionwise work and staff requirement :-**

1. **Underframe Section:-** To manufacture Underframe of BOXNHL-MBS wagon. 53 staff is required in this section.
2. **Body Fabrication Section:-** To manufacture Side wall and End wall of BOXNHL-MBS wagon. 33 staff is required in this section.
3. **Body Assembly Section:-** Assembly of Side wall & End wall with Underframe and fitting of Flap door. 52 staff is required in this section.
4. **Paint Section:-** Painting and Stenciling of BOXNHL-MBS wagon. 06 staff is required in this section.
5. **Machine Work Section:-** For mfg. of Trade failure items. 07 staff is required in this section.
6. **Mill Wright Section:-** Preventive and Breakdown maintenance of all M&Ps of this workshop. 26 staff is required in this section.
7. **PCO (Production Control Organization):-** PCO comprises of Planning, Progress, Inspection, Drawing and Store section. 42 staff is required in this section.
8. **Planning:-** Preparing of Estimate of BOXNHL-MBS wagon, Incentive work, M&P proposal, Works Proposal. 09 staff is required in this section.
9. **Progress-I:-** Preparing of Indents, material management and all paper work regarding materials. 08 staff is required in this section.
10. **Progress-II:-** To receive material from Store Depot/SPJ and make availability of material in sections. 30 staff is required in this section.
11. **Inspection:-** Stage Inspection and Final Inspection of BOXNHL-MBS wagon. 08 staff is required in this section.
12. **Drawing:-** Study of drawing for requirement of materials and their types & quantity. 05 staff is required in this section.
13. **Store:-** For storing of materials required in mfg. and repairing activity of wagons. 07 staff is required in this section.
14. **C-Category Section:-** C-Category repair of BOXN unloadable wagons. 121 staff is required in this section.

15. **Mech.Ministerial, Mech.Personnel & Mech.Personnel (Other):-**  
Establishment work as like, Receive & Dispatch, Training, Pass, PTO, TA, D&AR, Selection and promotion, Settlement, Union, Tender, Budget, MPP etc. 20 staff is required in this section.

Total required staff -  $53+33+52+06+07+26+42+09+08+30+08+05+07+121=407$

**TARGET & OUT-TURN**

Month	BOXNHL-MBS mfg.		C-Category repair	
	Target	Out-Turn	Target	Out-Turn
Jan.'20	20	20	125	162
Feb.'20	20	18	125	103
Mar.'20	20	1	125	96
Apr.'20	20	12	125	20
May.'20	20	5	125	80
June.'20	20	16	125	152

### Chapter- III

#### **Critical Analysis:-**

**BOS - 408 MOR - 343 Vacancy - 65**

1. There are 14 section in Mechanical Workshop Samastipur. At present Month of June'2020 BOXNHL-MBS mfg. Target 20, Outturn16 and C-Category repair Target 125, Outturn152.
2. The above position shows the work load of Mechanical Workshop Samastipur is reduced. Work Study team observed that the work load on need base of Mechanical Workshop, Samastipur.

At present sanctioned strength is - 408

At present men on roll is - 343

At present requirement - 407

Excess Staff  $408-407=01$

On the above position work study team observed that, the 407 staff are required for present work load. Hence, work study team observed and discussion with concerning authority, that 01 post of Jr.Clerk may be recommended for surrender.

## CHAPTER –IV

### **Recommendation :-**

As there is no yardstick for calculation of Workshop staff. The work study team has made its assessment of staff on the need base , it is observed that the 01 post of Jr.Clerk may be recommended for surrender. The 01 post of Jr.Clerk is excess than requirement.

Total Sanction Strength = 408

Total Men on Roll = 343

Total Staff required = 407

**Excess Staff = 408-407 = 01 Staff**

After going through the requirement of staff ,the work study team observed that the 01 posts of Jr.Clerk are recommended for surrender and financial saving will be Rs 5.83 Lac per annum. The work is going on without any hindrance.

## CHAPTER: - V

### FINANCIAL SAVINGS :-

If the recommendation of the study report is implemented, the annual recurring financial savings will be as under:

S.N o.	Category	Level	Mean pay per month	DA @ 17 %	Total pay per month per staff (Rs.)	No. of post	Annual financial savings (Rs. )
1	Jr.Clerk	L-2	41550	7064	48614	01	583368
Total Total						01	583368 i.e 5.83Lakh only

## CHAPTER VI

### Summary:-

After critically examining the work load of Mechanical Workshop, Samastipur, the work study team proposes as below:-

S.No.	Designation	BOS	Man on Roll	Requirement as per WS	Proposed surrender	Remark
1.	Jr.Clerk	01	02	00	01	01 post of Jr.Clerk may be recommended for surrender against higher grade vacancy.
Total		01	02	00	01	

Total posts proposed for surrender = 01

**Annexure -I**

Sanction Strength of Mechanical workshop Samastipur as on 01.11.2020.

SI NO.	DESCRIPTON		Sanctioned Strength	Men on Roll	vacancy
1.	No of Supervosprs		18	15	03
2.	No of Artisans		51	27	24
3.	No of Unskilled staff		13	04	09
4	Ministerial Staff /Gen.	Gr. 'C'	12	13	+1
		TADK	01	01	0
5	Personnel	Gr. 'C'	11	13	+2
		Gr. 'D'	08	07	1
6	Pointsman		01	01	0
7	Shuntman		01	00	1
Total			408	343	65