



**WORK STUDY TO REVIEW THE  
STAFF STRENGTH OF  
MECHANICAL MILL WRIGHTSHOP - GOC  
– TIRUCHCHIRAPPALLI DIVISION**

**SOUTHERN RAILWAY**

**PLANNING BRANCH**

**G. 275 / WSSR-132021 / 2020-21**

**WORK STUDY TO REVIEW THE  
STAFF STRENGTH OF MECHANICAL  
MILL WRIGHT SHOP - GOC  
TIRUCHCHIRAPPALLI DIVISION**

**STUDIED BY**

**WORK STUDY TEAM  
OF  
PLANNING BRANCH**

**MARCH 2021**

**(i)**  
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(i)

**ACKNOWLEDGEMENT**

The work study team acknowledges the valuable guidance and various data submitted by the Coordinating Officer, Supervisor and other supervisors and staff of Mechanical Millwright Shop/GOC to conduct the study.

(ii)

**AUTHORITY**

Annual programme of Work study's approved by SDGM for the year 2020-21.

(iii)

**TERMS OF REFERENCE**

To review the staff strength at Mechanical Mill Wright Shop at GOC Workshop – TPJ Division.

(iv)

**METHODOLOGY**

- 1) Collection of data.
- 2) Observation of present system of working.
- 3) Interaction with officers, supervisors and workers.
- 4) Requirement of staff have been allowed on need base.

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(v)

**SUMMARY OF RECOMMENDATIONS****RECOMMENDATIONS:**

The following vacant posts are found excess to the requirement at MMW/GOC may be surrendered and credited to the Bank of Surplus posts.

<b>SL. NO.</b>	<b>CATEGORY</b>	<b>GRADE PAY(RS.)</b>	<b>NO.OF POSTS</b>
1.	SSE	4600	2
2.	JE	4200	4
3.	OS	4200	2
4.	Sr.Clerk	2800	1
5.	Junior Clerk	2000	1
6.	Sr.Tech(Mech.Fitter)	4200	1
7.	Sr.Tech(MW.Fitter)	4200	3
8.	Sr.Tech(Crane Operator)	4200	1
9.	Tech.Gr.I(Mech.Fitter	2800	4
10.	Tech Gr.I(MW.Fitter)	2800	44
11.	Tech Gr.I(Machinist)	2800	1
12.	Tech Gr.I(Painter)	2800	1
13.	Tech Gr.I(Welder)	2800	1
14.	Tech Gr.I(Crane Operator)	2800	2
15.	Tech Gr.II (MW.Fitter)	2400	2
16.	Tech Gr.II(Machinist)	2400	1
17.	Tech.Gr.III(Mech.Fitter)	1900	1
18.	Tech Gr.III(MW.Fitter)	1900	15
19.	Tech Gr.III(Machinist)	1900	1
<b>Total</b>			<b>88</b>



**1.0 INTRODUCTION**

1.1 Mechanical Department is one of the major departments in Railways. The Manufacturing and maintenance of Locos, Rolling stock are being done by the Mechanical Branch. Innovation, improvements, research, training etc. are essential features in its functioning.

1.2 The role of the production units and workshops in Indian Railways is paramount for self sufficiency and impact substitution. In fact now they are excellent centre for export activities and help organization like RITES, IRCON etc. They provide locos and rolling stock not only to Indian Railway but also to other PU undertakings and also undertake their POH activities. In top, the Mechanical Department is playing a vital role in running about 18,000 trains daily throughout breath and length of over country.

**1.3 GOLDEN ROCK WORKSHOP:**

The erstwhile S.I.R Company Limited had its major Workshop located at Nagapattinam, a port town in the East Coast to cater to the needs of the Mechanical Department. Later, due to increased workload, the Workshop was re-located to a center place of the S.I.R Company the then Golden Rock, now at Ponmalai near Trichchirappalli. In Indian Railways, GOC Workshop layout is the best one with a traverser traveling to a length of the workshop supplying the job to the various shops parallel. This shop is constructed with mixed gauges to carry out repairs of both BG and MG rolling stock. This has created the history by assisting the Royal Air Force in repairing Fighter Bombers in the Second World War.

1.4 The Golden Rock Workshop (Officially called as Central Workshop, Golden Rock, abbreviated GOC), in Ponmalai (Golden Rock), Tiruchirappalli, Tamilnadu is one of the three Railway Work Shops serving in South Zone. The Workshop is part of the Railways' Mechanical Department. The other two Southern Railway mechanical workshops are Carriage Works and Loco Works situated at Perambur, Chennai. The Chief Workshop Manager (CWM) is over all in-charge for this workshop and

he is assisted with other Mechanical, Electrical, Stores, Accounts and personnel Officers.

#### 1.5 **WORKSHOP DETAILS:**

Year of Built	;	1926-28
Total area	;	200 Acres
Shop Area covered	;	26 Acres
Track length	:	67 Kilometers

#### 1.6 **WAGON MANUFACTURING/OVERHAULING:**

For the first time in its 85 year old history, the Golden Rock Railway Workshop is all set to overhaul freight wagons of broad gauge type. The Railway Board has given to go ahead in this regard to the GOC, engaged in a mosaic of activities such as manufacture of oil-fired steam locomotives, container and stainless wagons besides carrying out periodic overhaul of diesel locos and passenger coaches.

1.7 GOC workshop had began to manufacture wagons in 1962, has produced 34,901 wagons in 53 designs. The work shop is producing container wagons for Container Corporation of India (CONCOR)

1.8 This workshop is equipped with a highly skilled technical workforce and sound infrastructure facilities and will overhaul wagons used by different railway zones. Once overhauled, the wagons would again be sent for a periodic refurbishment after four and a half years. In the past few years, the workshop had dispatched a little over 3,800 container wagons for the Container Corporation of India. It exported over 120 "in-service" meter gauge diesel locomotives to many developing countries after carrying out necessary modification in them.

1.9 The workshop became the first Railway Repair Unit in Indian Railways to obtain ISO 9002 certification and 14000 (eco friendly).

1.10 The scope of this study is to review the staff strength at Mechanical Millwright Shop/GOC (MMW/GOC).

**2.0 PRESENT SCENERIO**

- 2.1 This workshop was established in 1928 by the erstwhile company Railway, South Indian Railway at Golden Rock. It was the boom period for the Railway companies in India. Though predominantly a MG Railway system, the SIR had to maintain different types of engines and rolling stock. At most every component had to be made by Railways itself or to be imported.
- 2.2 This workshop was utilized as a factory for making and servicing the military equipments for a brief period during the Second World War. The amalgamation of M&SM Railway, SIR and Mysore state Railways, the operation of the Nilgiri Mountain Railways etc. had its own impact on the activities of GOC Workshop.
- 2.3 The Steam locos were replaced with Diesel electric locos and later Electric locos. The introduction of DMU, track maintenance machines, OHE tower wagon etc. has brought in come with new activities.
- 2.4 On the Rolling stock side, there were number of changes. A few are listed below:
  - a) Vaccum brake to Air brake
  - b) Anti-telescopic/All steel bodied coaches and LHB coaches.
  - c) CBC coupling replacing screw coupling, transition coupling etc.
  - d) Gauge conversion
  - e) Improvements in speed and loading capacity.
  - f) Increased number of AC coaches, special type wagons etc
  - g) Roller/Tapper bearing
  - h) Fire resistant coaches
  - i) Computerization in Locos and machineries.
  - j) Enhanced periods for BPC and increased spacing between POH/IOH
  - k) New type of brake blocks springs mountings.



2.5 This workshop has already obtained ISO 9001 and ISO 14001 and moving towards achieving ISO 18001 certification.

2.6 This is one amongst the three mechanical workshops in Southern Railway. This has become a pioneering workshop for export of reconditioned and modified MG locos, MG coaches and Wagons to various countries like Tanzania, Malaysia, Sudan, Senegal and Mozambique through RITES& IRCON. It is a major workshop in Indian Railways where wagon building is undertaken. It is the leading manufacturer of BLC wagons. It is manufacturing X class locos fitted with all welded boiler design for Nilgiri Railways. It is also imparting regular training to foreign Railway personnel. It undertakes POH of PSU locos of undertaking like FACT, NTPC, DSP, BSP, SAIL etc.

## 2.7 **MECHANICAL MILL WRIGHT (MMW)**

MMW is a specialized wing in the Golden Rock workshop to attend the machines during their failures and certain specialized maintenance activities. These are preventive and break down maintenance and provision of alternate machines. The Electrical millwright is a separate wing to attend the electrical part of the machines. Now days, these activities are attended through tenders. At present 17 shops are coming under the purview of MMW/GOC. The MMW is under the control of Production Engineer (PE) and SSE/MMW is in overall in-charge. A set of SSEs/SEs and JEs are available to assist them as well as to act as in-charge for the particular section. Apart from GOC work shop, the MMW staffs are attending various capacity EOT cranes, Electrical Hoist and whiting Jacks over TPJ, TVC & MDU Divisions.

## 2.8 **THE STAFF STRENGTH OF MMW / GOC:**

As on 16.07.2020 the sanctioned and actual strength of Technicians and Helpers are as follows:

Auth: WPO/GOC letter No.GPB(G)136-A-26 dated 20.07.2020.

Sl. No.	Designation	Sanction	Actual	Vacancy
1	Sr.Technicians	53	53	-
2	Technician-Gr.I	101	22	79
3	Technician-Gr.II	11	11	-
4	Technician-Gr.III	26	12	14
5	Helper I & II	0	9	-9
	<b>Total</b>	<b>191</b>	<b>107</b>	<b>84</b>

- 2.9 As on 16.07.2020 the sanctioned and actual strength of Supervisor's and Ministerial staff is as follows:

Auth: WPO/GOC letter No.GPB(G)136-A-26 dated 20.07.2020.

Sl. No.	Designation	Sanction	Actual	Vacancy
<b>SUPERVISORS</b>				
1	SSE/Mech.	13	10	3
2	JE/Mech.	7	4	3
	<b>TOTAL</b>	<b>20</b>	<b>14</b>	<b>6</b>
<b>MINISTRIAL STAFF</b>				
3	Ch.OS	1	1	-
4	OS	2	-	2
5	Sr.Clerk	1	-	1
6.	Junior Clerk	2	1	1
	<b>Total</b>	<b>6</b>	<b>2</b>	<b>4</b>

2.10 **SUMMARY OF TOTAL STAFF AT MECHANICAL MILLWRIGHT SHOP /GOC:**

Sl. No.	Designation	Sanction	Actual	Vacancy
1	Technician & Helpers	191	107	84
2	Supervisors	20	14	6
3	Ministerial Staff	6	2	4
	<b>Total</b>	<b>217</b>	<b>123</b>	<b>94</b>

2.11 The various Designated (Trade) Staff working in Mechanical Millwright shop is given below:

1. Fitter/Millwright (MW)
2. Machinist
3. Fitter(Mechanical)
4. Welder
5. Crane operator
6. Painter
7. Helper
8. Foundry Man
9. Motor driver
10. Diesel fitter

**2.12 AS ON 14.10.2020 THE DISTRIBUTION OF STAFF FOR VARIOUS SHOPS IS AS FOLLOWS:**

Total staffs allotted for the shops are 104. But, the staffs presented on 14.10.2020 were 75 and their distribution is shown below:

1.	CO2 Maintenance	CO2	2
2.	Air Compressor Maintenance	ACM	4
3.	Electrical overhead traveling crane	EOT	9
4.	Fabrication & smithy	FSS	4
5.	Furnace shop	FUR	3
6.	Heavy Electrical shop	HERS	4
7.	General – Gang	GG	7
8.	Motor Gang	Motor	1
9.	Machine shop	MS	5
10.	Pump gang	Pump	2
11.	Road Transport	RT	9
12.	Wagon Body shop	WBS	6
13.	Wagon Component shop	WCS	4
14.	Wheel Shop	WS	4
15.	EBR Maintenance	EBR	5
16.	Machine gang	MG	4
17.	Trestle		2
<b>TOTAL</b>			<b>75</b>

### 2.13 THE DUTY ROSTER

Morning - 7 – 11.30 hours  
 Evening - 12.30 – 16.30 hours  
 Saturday - 7 – 11.30 hours

Whenever there is night shift, the booked roster is from 21-30-24/0630 hrs on Monday to Friday and 2130-24/0530 on Saturday.

The CWM office staff are working in General shift from 9.30 -13.00 hrs. and from 13.30 to 17.00 hrs on Monday to Friday and from 9.30 to 15.00 hrs on Saturday.

### 2.14 DESCRIPTION OF WORK IN EACH SHOP AND TOTAL NUMBER OF MACHINES AVAILABLE:

SL. NO.	GANG	NATURE OF WORK	TOTAL NO.OF MACHINES
1.	EOT	Attending Schedule Maintenance & Break down attention of EOT, Traverse and Hoist in all shops. Modification work in EOT cranes	71 Nos.-EOT 42 Nos. – Hoist 5 Nos. -Traverser
2.	Motor	Attending Schedule maintenance & Breakdown attention of all grinding Machines. Maintenance of Rolling shutter Gear Box Unloading and Loading of Motor from EOT	33 Nos. (Grinding Machine )
3.	Trestle	Periodic maintenance of trestle at all shops	164 Nos.
4.	Air Compressor	Attending schedule maintenance & Breakdown attention of compressors in all shops ( M & Ps & T & Ps)	70 Nos. (M & P – 42 T & P – 28)
5.	General	Condemnation of M & Ps (Dismantling & Disposal of scrap yard) Relocating of Machines Fabrication of support structures of machineries, Scrap disposal of MMW shop	--
6.	Pump	Attending schedule maintenance & Breakdown attention of High pressure water jets pump at CRS, BRS, FSS, & MMW. Leakage attention in Air pipeline Breakdown attention of pit water pump at WS,EBR	5 Nos (High pressure pump)

7.	EBR	Attending Schedule maintenance & Breakdown attention of M & Ps at EBR, TMS, UTS & BS	60 Nos.
8.	MS	Attending Schedule maintenance & Breakdown attention of M & P at Machine shop and Tool Room	64 Nos.
9.	FSS	Attending Schedule maintenance & Breakdown attention of M & P at FSS	14 Nos.
10.	HERS	Attending Schedule maintenance & Breakdown attention of M & P at HERS & DSL and Breakdown attention of T & P s at HERS & DSL	43 Nos.
11.	Furnace	Attending Schedule maintenance & Breakdown attention of all Furnaces at FSS, TR, EBR & Brass foundry	10 Nos
12.	WBS	Attending Schedule maintenance & Breakdown attention of M & Ps at WBS, CRS, BRS, TLS A/C & PS	31 Nos.
13.	WCS	Attending Schedule maintenance & Breakdown attention of M & Ps at WBS, WCS, CMS & CBS.	28 Nos.
14.	Co2 Welding Plant	Attending Schedule maintenance & Breakdown attention of Co2 Welding plant in M & Ps and Breakdown attention of Co2 welding plant in T & Ps at all shops	102 Nos (in M&Ps)
15.	Wheel Shop	Attending Schedule maintenance & Breakdown attention of M & P and Breakdown attention of T&Ps at wheel shop	30 Nos (in M&Ps)
16.	RT	Attending Schedule maintenance & Breakdown attention of Forklift, Heavy trucks, staff cars, Ambulance & EBT Allocating driver to Yard shop, staff cars & Ambulance	66 Nos RT Vehicles
17.	Machining	Machining of spares required during maintenance activities in all gang	--

**2.15 MACHINE AND PLANT MAINTENANCE ATTENDED BY STAFF OF MECHANICAL MILWRIGHT SHOP/GOC (MMW) STAFF AT TVC, MDU & TPJ DIVISIONS:  
AT TVC DIVISION:**

SL.NO.	NAME OF THE DEPOT	TYPE OF M & P ATTENDED
1.	SSE/DSL Shed/ERS	Various capacity Cranes, Pillar Hoist, Mono Rail Hoist
2.	SSE/ C & W /TVC	Various capacity Cranes, Hoist & Pit wheel Lathe
3.	SSE/ C & W /ERM CD	7.5 Ton & 5 Ton Hoist
4.	SSE/ C & W /IPN	5 Ton Hoist
5.	SSE/ C & W /ERM G	140 Ton BD Crane & Single Steel Wire Ropes ART Steel Wire Ropes
6.	SSE/ C & W /NCJ	7.5 Ton Hoist

**AT MDU DIVISION:**

SL.NO.	NAME OF THE DEPOT	TYPE OF M & Ps ATTENDED
1.	SSE/C & W /TEN	10/3 Ton Crane 5 Ton Hoist, ART Steel Wire Rope Jamalpur Whiting Jack – 5 Nos
2.	SSE/ C & W /MVN	3 Ton Hoist
3.	SSE/ C & W /TN	10/3 Ton Crane
4.	SSE/ C & W /MDU	140 Ton BD crane & Slings Steel wire Ropes ART Steel wire Ropes, 5 Ton Hoist Jamalpur Whiting Jack – 5 Nos
5.	SSE/ C & W /RMM	10/3 Ton Crane 5 Ton Hoist Jamalpur Whiting Jack – 5 Nos
6.	SSE/ C & W /MVN	Jamalpur Whiting Jack – 5 Nos

**AT TPJ DIVISION:**

SL.NO.	NAME OF THE DEPOT	TYPE OF M & P ATTENDED
1.	SSE/C & W /BG Complex/TPJ	7.5 Ton Hoist, 5 Ton Hoist Jamalpur Whiting Jack – 15 Nos
2.	SSE/ C & W /TPGY	140 Ton crane & Slings Steel wire Ropes ART Slings Steel wire Ropes
3.	SSE/ C & W /VM	20/5 Ton Crane ART Steel wire Ropes Jamalpur Whiting Jack – 5 Nos
4.	SSE/ DSL Shed/GOC	Various capacity Cranes, Hoist, Screw Jacks – 10 Pit Wheel Lathe
5.	SSE/ C & W /VM	10/3 Ton Crane, 5 Ton Hoist Jamalpur Whiting Jack – 5 Nos
6.	SSE/ C & W /MVN	Jamalpur Whiting Jack – 5 Nos

A total number of 142 new machines have been inducted at GOC Work Shop

**2.16 STORES:**

473 Non-stock items are in hand and the total value of the stores is Rs.72, 45, 084/-

**2.17 DETAILS OF PRESENT AND PROPOSED OUT SOURCING ACTIVITIES:**

- A. Proposed Outsourcing Activities – CAMC for three months  
(Optical Emission Spectrometer – U.C.No.120675001
- B. Atomic Absorption Spectrometer – U.C.No.121575001 &
- C. Computerized Brinell Hardness Testing Machine -U.C.120649007
- D. Contract activities for Wheel Lathe – U.C.No.123002006.




**2.18 OTHER DETAILS:**

Other than the computerized failure booking, the Minor repairs are being attended by the MMW staff for the failures received through memos and over phone calls.

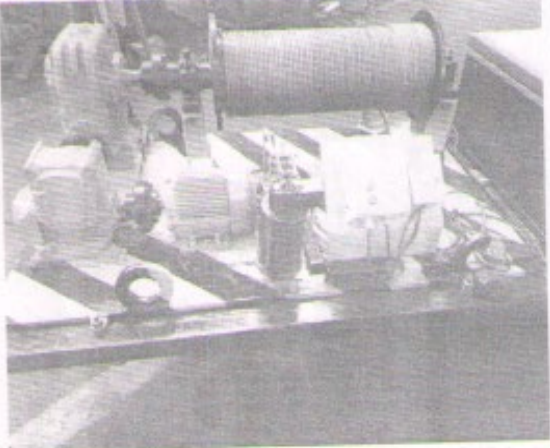
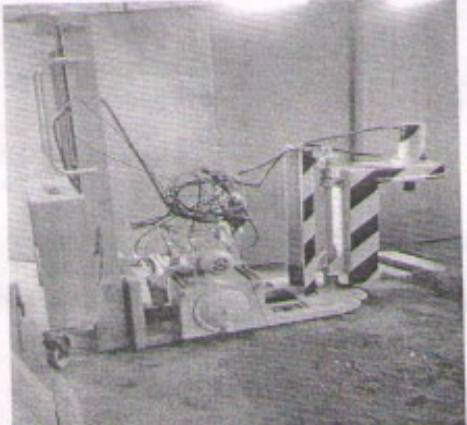

The following innovations have been carried out at Mechanical Mill Wright Shop/GOC and the same is appended below: (9 Items)

## Innovations at MMW

- Page - ①



Sl. No.	Item	Description
1	<b>HYDRAULIC PRESS</b> 	<ul style="list-style-type: none"> <li>➤ Used for axle box bearing assembly at wheel shop.</li> <li>➤ Reduces human effort and prevents bearing from damages.</li> </ul>
2	<b>MOBILE JET CLEANING PLANT</b> 	<ul style="list-style-type: none"> <li>➤ The Wheel Shop/GOC doing the Roller bearing cleaning in the mounted condition of the ICF/BG axles.</li> <li>➤ The actual practice is cleaning with kerosene in the tray by manual hand cleaning method. In this regard MMW staff has developed a mobile jet cleaning plant fitted with motorized pump to ease the cleaning process.</li> </ul>
3	<b>PULLER FOR EXTRACTING MSU TUBE SLEEVE</b> 	<ul style="list-style-type: none"> <li>➤ It is easy to handle and user friendly.</li> <li>➤ Developed without any additional cost.</li> <li>➤ Damage of sleeve avoided. (dent, bulging and crack)</li> <li>➤ Quick extraction of sleeve MSU tubes.</li> <li>➤ No additional manpower required to operate.</li> </ul>



4	<b>MECHANISED WINCH</b>		<ul style="list-style-type: none"> <li>➤ For loading and unloading of EOT crane motors &amp; gear boxes.</li> <li>➤ Electrically operated one.</li> <li>➤ Easy handling to the employees.</li> <li>➤ Less man power.</li> <li>➤ Portable one.</li> <li>➤ Safe operation ensured to the employees.</li> <li>➤ Rupees 2.5 lakhs saved to railways by outside procurement.</li> </ul>
5	<b>LHB PRESS PRIMARY SUSPENSION</b>		<ul style="list-style-type: none"> <li>➤ Used for assembling and dismantling secondary suspension spring</li> </ul>
6	<b>LHB COACH SECONDARY SUSPENSION/BR5</b>		<ul style="list-style-type: none"> <li>➤ Used for assembling and dismantling secondary suspension spring.</li> </ul>

Innovation

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7	<b>WHEEL SKATE TROLLEY</b> 	<ul style="list-style-type: none"><li>➤ 8 nos wheel skate trolleys were manufactured for ARTS to MDU, TPI &amp; TVC divisions in 2016.</li><li>➤ 3 nos of wheel skate trolleys are under manufacturing.</li></ul>								
8	<b>MECHANIZED ANGLE BENDING MACHINE</b> 	<ul style="list-style-type: none"><li>➤ Used for bending of components of X-Class Roof Driver cabin angle (45 x 45 x 5 mm) and BVZN Roof of Guard cabin (50 x 50 x 8 mm) angle.</li><li>➤ Eliminated manually bending operation which involves frequent rework on the jobs.</li><li>➤ The cost involved in fabricating the machine is Rs.8000/-. The cost of the new machine is approximately around 3 to 4 lakhs.</li></ul>								
9	<b>FOT CRANE</b> <table><tr><td>M/c Id</td><td>307151190</td></tr><tr><td>Make</td><td>Heywood and Co Ltd</td></tr><tr><td>Commissioning on</td><td>01-01-1926</td></tr><tr><td>Age</td><td>93 Years</td></tr></table>	M/c Id	307151190	Make	Heywood and Co Ltd	Commissioning on	01-01-1926	Age	93 Years	<ul style="list-style-type: none"><li>➤ The saw mill shop has been closed for more than 15 years. The crane has not been in use for all these years. MMW and EMW staff modified the crane from DC to AC and brought back the crane to working condition.</li></ul>
M/c Id	307151190									
Make	Heywood and Co Ltd									
Commissioning on	01-01-1926									
Age	93 Years									

Keeping the above, an analysis has been made to arrive the requirement of staff for Mechanical Millwright Shop/GOC.

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**CHAPTER -III****3.0 CRITICAL ANALYSIS:**

The requirement of staff arrived for Mechanical Millwright (MMW) is very complex due to the following reasons:

1. There is no direct relationship between the quantum of production or product value with the number of MMW staff.
2. There are no prescribed yardsticks or benchmarks separately for MMW staff.
3. There is No direct proportion of MMW staff with other shop staff is prescribed.
4. The demarcation of activities between MMW and EMW wings are very vague.
5. The value of products/services is not compared with market value/import cost.
6. The frequency of utilization and maintenance requirements are not tabulated.

Due to the above factors, the work study team has to rely upon to come macro figures in which there is bound to be some marginal deviations in the assessment of staff for some activities.

**3.1 STAFF STRENGTH AT MECHANICAL MILLWRIGHT SHOP (MMW):**

SL NO.	DESIGNATION	STAFF STRENGTH SUBMITTED BY WPO/GOC (As on 14.07.2020)		STAFF STRENGTH SUBMITTED BY SSE/MMW/GOC (As on 15.12.2020)	
		Sanction	Actual	Sanction	Actual
1.	Supervisors	20	14	20	14
2.	Ministerial staff	6	2	6	2
3.	Artizans	191	107	207	117
<b>TOTAL</b>		<b>217</b>	<b>123</b>	<b>233</b>	<b>133</b>

- 3.2. The Daily staff position at MMW/GOC ON 14.12.2020, 15.12.2020 & 16.12.2020 is as follows:

GENERAL SHIFT STRENGTH	SSE	JE	CRI	CLERK	DRIVERS	ARTIZANS	TOTAL
On Roll Staff	11	3	2	2	10	105	133

<b>Staff present on 14-12-2020</b>							
On Duty	0	0	1	0	0	7	8
Training	0	0	0	0	0	0	0
CR	0	0	0	0	0	3	3
Present	9	1	1	2	9	80	102
<b>TOTAL</b>	<b>9</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>9</b>	<b>90</b>	<b>113</b>

3.3

<b>GENERAL SHIFT STRENGTH</b>	<b>SSE</b>	<b>JE</b>	<b>CRI</b>	<b>CLERK</b>	<b>DRIVERS</b>	<b>ARTIZANS</b>	<b>TOTAL</b>
<b>On Roll Staff</b>	<b>11</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>10</b>	<b>105</b>	<b>133</b>
<b>Staff present on 15-12-2020</b>							
On Duty	0	0	1	0	0	7	8
Training	0	0	0	0	0	0	0
CR	0	0	0	0	1	3	4
Present	9	1	1	2	9	84	106
<b>TOTAL</b>	<b>9</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>10</b>	<b>94</b>	<b>118</b>

3.4

<b>GENERAL SHIFT STRENGTH</b>	<b>SSE</b>	<b>JE</b>	<b>CRI</b>	<b>CLERK</b>	<b>DRIVERS</b>	<b>ARTIZANS</b>	<b>TOTAL</b>
<b>On Roll Staff</b>	<b>11</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>10</b>	<b>105</b>	<b>133</b>
<b>Staff present on 16-12-2020</b>							
On Duty	0	0	2	0	0	11	13
Training	0	0	0	0	0	0	0
CR	0	1	0	0	1	1	3
Present	9	1	0	2	9	76	97
<b>TOTAL</b>	<b>9</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>10</b>	<b>88</b>	<b>113</b>

3.5 On discussion with the Coordinating Supervisor, it reveals that the number staff working at the Mechanical Millwright Shop is sufficient to manage the present level of work load. Apart from that, the vacant posts are lying since long and there is no scope for filling the posts. On direct observation, the work study team is also ensuring that the staff deployed is at par with the present level of work load. There is no fixed time to rectify the breakdown failures.

The BD failures and the rectification time to attend the failures were varied from minutes to hours together. The rectification time may vary according to the age and location of the machine. Hence, the work study team could not assess the time taken for each and every activity. Apart from that, the staffs are attending maintenance of EOT Cranes, Hoists and ART Steel Wire Ropes at TVC, MDU and TPJ Divisions/Work Shops of the above divisions.

3.6 It is seen from the daily staff position posted at shops is an average of 110 to 120 staff. As per the Sanction, Actual, Vacancy statement submitted by WPO/GOC shows that the sanction strength of staff for MMW/GOC is 217 and the actual staff workings are 133. The vacant posts as per WPO/GOC sanctioned strength and actual staff working as on 15.12.2020 are 84. (i.e 217 – 133).

3.7 On discussion held with SSE/MMW/GOC (Coordinating supervisor) he stated that the actual staff working is at par with the present level of work load. By considering the present level of work load and actual staff working in a day, the work study team has taken a lenient view and allowed 152 staff for MMW/GOC on need base.

3.8 **REVISION OF YARDSTICK NORMS OF VARIOUS O & M ACTIVITIES:**

As per the Railway Board's letter No.11-2019/SPMPS/Yardstick/2 dated 30.06.2020 (Copy enclosed as Annexure - II), the content of the letter at para-3 is re-produced as follows:

*"Pursuant to the decision taken by the Board in its meeting held on 29.06.2020, it has been decided that the Yardsticks/Norms of various O&M Activities across all departments on the Railways stand reduced by 15% on as is where basis as an interim measure w.e.f. 01.07.2020."*

To comply with the Railway Board's instructions, the requirement of staff allowed by the work study team is reduced by 15%. The net requirement of staff for SSE/MMW/GOC after comply the Boards instructions are as follows:

Requirement of staff as per Work Study	=	152
15% of staff to comply Rly. Boards instructions (i.e. 152 x 15%)	=	22.8 (Say 23)
<b>Net requirement of staff on applying Board's instruction (i.e 152 – 23 )</b>	<b>=</b>	<b>129</b>

### 3.9 THE REQUIREMENT OF STAFF FOR EACH CATEGORY IS AS FOLLOWS:

Sl. No.	Designation	Sanction (As per WPO/GOC)	Actual (As per SSE/MMW/GOC)	Vacancy	Requirement
1.	Supervisors	20	14	6	14
2.	Ministerial staff	6	2	4	2
3.	Artizans	191	117	74	113
<b>TOTAL</b>		<b>217</b>	<b>133</b>	<b>84</b>	<b>129</b>

### 3.10 SANCTION VS REQUIREMENT:

SANCTION	ACTUAL	VACANCY	REQUIREMENT
217	133	84	129

### 3.11 DESIGNATION WISE REQUIREMENT OF STAFF FOR MMW/GOC:

Sl. No.	Designation	Sanction	Actual	Requirement	Surplus
<b>SUPERVISORS (A)</b>					
1.	SSE	13	11	11	2
2.	JE	7	3	3	4
<b>TOTAL</b>		<b>20</b>	<b>14</b>	<b>14</b>	<b>6</b>
<b>MINISTRIAL STAFF (B)</b>					
3.	Ch.OS	1	1	1	0
4.	OS	2	0	0	2
5.	Sr.Clerk	1	0	0	1
6.	Junior Clerk	2	1	1	1
<b>TOTAL</b>		<b>6</b>	<b>2</b>	<b>2</b>	<b>4</b>
<b>ARTISANS (C)</b>					
7.	Sr.Tech (Mech.Fitter)	3	117	113	1
8.	Sr.Tech (MW.Fitter)	47			3
9.	Sr.Tech (Machinist)	2			0
10.	Sr.Tech (Crane Operator)	1			1
11.	Tech.Gr.I(Mech.Fitter)	7			4
12.	Tech Gr.I(MW.Fitter)	83			44
13.	Tech Gr.I(Machinist)	7			1
14.	Tech Gr.I(Painter)	1			1
15.	Tech Gr.I(Welder)	1			1

16.	Tech Gr.I (Crane Operator)	2			2
17.	Tech.Gr.II(Mech.Fitter)	1			0
18.	Tech Gr.II(MW.Fitter)	9			2
19.	Tech Gr.II(Machinist)	1			1
20.	Tech.Gr.III(Mech.Fitter)	2			1
21.	Tech Gr.III(MW.Fitter)	22			15
22.	Tech Gr.III(Machinist)	2			1
<b>TOTAL</b>		<b>191</b>	<b>117</b>	<b>113</b>	<b>78</b>
<b>GRAND TOTAL (A+B+C)</b>		<b>217</b>	<b>133</b>	<b>129</b>	<b>88</b>

### 3.12 RECOMMENDATIONS:

The following vacant posts are found excess to the requirement at MMW/GOC may be surrendered and credited to the Bank of Surplus posts.

SL. NO.	CATEGORY	GRADE PAY (RS.)	NO.OF POSTS
1.	SSE	4600	2
2.	JE	4200	4
3.	OS	4200	2
4.	Sr.Clerk	2800	1
5.	Junior Clerk	2000	1
6.	Sr.Tech (Mech.Fitter)	4200	1
7.	Sr.Tech (MW.Fitter)	4200	3
8.	Sr.Tech (Crane Operator)	4200	1
9.	Tech.Gr.I (Mech.Fitter)	2800	4
10.	Tech Gr.I (MW.Fitter)	2800	44
11.	Tech Gr.I (Machinist)	2800	1
12.	Tech Gr.I (Painter)	2800	1
13.	Tech Gr.I (Welder)	2800	1
14.	Tech Gr.I (Crane Operator)	2800	2

15.	Tech Gr.II (MW.Fitter)	2400	2
16.	Tech Gr.II (Machinist)	2400	1
17.	Tech.Gr.III (Mech.Fitter)	1900	1
18.	Tech Gr.III (MW.Fitter)	1900	15
19.	Tech Gr.III (Machinist)	1900	1
<b>Total</b>			<b>88</b>



**4.0 PLANNING BRANCH'S REMARKS ON CO-ORDINATING OFFICER'S VIEWS**

The draft work study report sent to the to the Co-ordinating Officer through e-office (Dy CME/P/GOC) on 04.03.2021. The time limit allowed for the Co-ordinating Officer to respond is only 15 days.

Upto 19.3.21 . No remarks has been received from the co-ordinating officer .

Hence, the report is released without the remarks of the co-ordinating officer.

**5.0 FINANCIAL SAVINGS**

5.1 If the recommendations made in the study report are implemented, the annual recurring financial savings will be as under:

<b>Sl. No.</b>	<b>Category</b>	<b>Grade pay (Rs)</b>	<b>No.of posts</b>	<b>Money Value(Rs)</b>	<b>Annual savings(Rs)</b>
1.	SSE	4600	2	109571	26,29,704
2.	JE	4200	4	86463	41,50,224
3.	OS	4200	2	86463	20,75,112
4.	Sr.Clerk	2800	1	71078	8,52,936
5.	Junior Clerk	2000	1	53118	6,37,416
6.	Sr.Tech (Mech.Fitter)	4200	1	86463	10,37,556
7.	Sr.Tech (MW.Fitter)	4200	3	86463	31,12,668
8.	Sr.Tech (Crane Operator)	4200	1	86463	10,37,556
9.	Tech.Gr.I (Mech.Fitter)	2800	4	71078	34,11,744
10.	Tech Gr.I (MW.Fitter)	2800	44	71078	3,75,29,184
11.	Tech Gr.I (Machinist)	2800	1	71078	8,52,936
12.	Tech Gr.I (Painter)	2800	1	71078	8,52,936
13.	Tech Gr.I (Welder)	2800	1	71078	8,52,936
14.	Tech Gr.I (Crane Operator)	2800	2	71078	17,05,872
15.	Tech Gr.II (MW.Fitter)	2400	2	62361	14,96,664
16.	Tech Gr.II (Machinist)	2400	1	62361	7,48,332
17.	Tech.Gr.III (Mech.Fitter)	1900	1	48614	5,83,368
18.	Tech Gr.III (MW.Fitter)	1900	15	48614	87,50,520
19.	Tech Gr.III (Machinist)	1900	1	48614	5,83,368
<b>Total</b>			<b>88</b>		<b>7,29,01,032</b>

**Annexure – I**

**AS ON 16.07.2020 THE SANCTION, ACTUAL, VACANCY STRENGTH OF SUPERVISOR'S AND MINISTERIAL STAFF ARE AS FOLLOWS:**

Auth: WPO/GOC letter No.GPB(G)136-A-26 dated 20.07.2020.

Sl. No.	Designation	Sanction	Actual	Vacancy
<b>SUPERVISORS</b>				
1	SSE/Mech.	13	10	3
2	JE/Mech.	7	4	3
<b>TOTAL</b>		<b>20</b>	<b>14</b>	<b>6</b>
<b>MINISTERIAL STAFF</b>				
3	Ch.OS	1	1	-
4	OS	2	-	2
5	Sr.Clerk	1	-	1
6.	Junior Clerk	2	1	1
<b>Total</b>		<b>6</b>	<b>2</b>	<b>4</b>

**2.9 SUMMARY OF TOTAL STAFF AT MECHANICAL MILLWRIGHT SHOP /GOC:**

Sl. No.	Designation	Sanction	Actual	Vacancy
1	Technician & Helpers	191	107	84
2	Supervisors	20	14	6
3	Ministerial Staff	6	2	4
<b>Total</b>		<b>217</b>	<b>123</b>	<b>94</b>

Please issue  
11/7/2020

SN-2

GOVERNMENT OF INDIA  
MINISTRY OF RAILWAYS  
RAILWAY BOARD

No.11-2019/SPMPS/Yardstick/2

New Delhi, dated 30.06.2020

General Managers,  
All Indian Railways/ PUs

Sub: Revision of Yardsticks/ Norms of various O&M activities on the Railways

Ref: Resolution of full Board Meeting dated

Consequent upon the directive from CRB in December, 2017, a comprehensive "Manpower Strategy Note" was issued to all Zonal Railways in May, 2018. Key component of this strategy was the revision of Yardsticks/Norms of various activities on the Railways. Board in its Meeting held on 28.12.2017 decided that manpower yardsticks for various O&M activities of all departments may be reviewed on account of technological inputs, outsourcing, changes in maintenance practices.

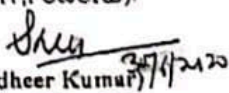
2.0 Accordingly, in May, 2019 Zonal Railways were advised to undertake a Zero Based Review of yardsticks for all O&M activities. Based on the inputs, the detailed views were given for concluding the revision of Yardsticks. Final view has already been given on Yardsticks for Civil Engg. (Trackmen), Medical, Accounts and Commercial Departments. However, the same in r/o Civil Engg. (Bridge & Works), S&T, Security, Stores, Operating, Personnel and other Miscellaneous Departments have not yet been finalized.

3.0 Pursuant to the decision taken by the Board in its meeting held on 29.06.2020, it has been decided that the Yardsticks/Norms of various O&M activities across all Departments on the Railways stand reduced by 15% on as is where basis as an interim measure w.e.f 01.07.2020. This will however not be applicable to Electrical, Mechanical and Accounts Departments where the revised Yardsticks have already been issued in September 2019.

4.0 The final Yardsticks/Norms for each discipline will be communicated subsequently with the approval of Board on case to case basis. This interim reduction will automatically get superseded once the final revision of Yardsticks/ Norms are issued.

5.0 The PCPO and PFA of concerned Zonal Railway/PU may accordingly revise the Yardsticks/Norms of various O&M activities across all Departments (except Electrical, Mechanical and Accounts) and communicate compliance to Planning Directorate.

This issues with the approval of full Board (ME, MTR, MRS/MMM, MST, MT, FC & CRB).

  
(Sudheer Kumar)  
Additional Member (Planning)  
Railway Board

Copy - CRB, ME, MT, MTR, MRS/MMM, MST, FC, DG/IR, Secy/RB, AM/Revenue

Civil Engg. Works

Sd/-