TIME STUDY

OF

WHEEL SHOP ACTIVITIES

IN

CARRIAGE WORKSHOP AJMER

(G/HQ/WS/463/13/Wheel Shop/AII(C)/2020-21**)**

GUIDED BY		**STUDIED BY**	
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Wheel Park

Wheel Boring Machine

WORK STUDY ORGANIZATION
NORTH WESTERN RAILWAY
JAIPUR

EXECUTIVE SUMMARY

Sr. No.	13
Study No.	G/HQ/WS/463/13/Wheel Shop/AII(C)/2020-21
Subject	Time Study of Wheel Shop Activities in Carriage Workshop Ajmer
Area	Carriage Workshop, Ajmer
Department	Mechanical
Terms of Reference	Assessment of man power requirement
Present Cadre	Sanctioned Strength = 68 On Roll Strength = 37 Vacancy = 31
Proposed Cadre	66
Projected Surplus Man Power	02
Total No. of Recommendations	02
Financial Implications	Rs.**09.45** Lakhs per annum
Month of Circulation of Report	Jan. 2021

INDEX

CHAPTER-1	INTRODUCTION

Introduction:

Indian Railway is one of the biggest transportation organizations among all other transport organizations in the country. In fact the Railway is backbone of the country's transport systems. Railway workshops are played the important role for overhauling of rolling stocks, therefore these stocks are running continuously without any failures.

The foundation of the prestigious Central Workshop was laid in 1876 and established in 1877 to undertake repairs and manufacture of Steam Locomotives, Carriages and Wagons of Rajputana – Malwa MG system.

It had the privilege of producing 467 steam locomotives during 1896-1949; including 20 Locomotives of XTI type. Production of new locos stopped in 1950 when Chitranjan Locomotives Works was set up.

This workshop started periodical overhauling (POH) & intermediate overhauling (IOH) of steam locomotives in 1884. The POH of MG Diesel Locomotives was started in 1979.

POH of MG Steam Locos was stopped in May 1995. MG Wagon POH activities were shifted from C&W Workshop, Ajmer to Loco Workshop with effect from January 2000.

Loco Workshop has been renamed as Diesel Loco & Wagon Workshop and C&W Workshop as Carriage Workshop. IOH of BG Diesel Locomotives commenced regularly from July 06 and the first BG Diesel Loco after POH was turned out from the shops in Jan 07.

Carriage workshop started periodical overhauling (POH) & intermediate overhauling (IOH) of ICF design BG coaches since 1995.

Carriage workshop started periodical overhauling (POH) & intermediate overhauling (IOH) of LHB design coaches since 2012.

Presently the carriage workshop is doing POH and IOH of both (ICF & LHB) design coaches.

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CHAPTER-2	**ACKNOWLEDGEMENT**

2.1 Coordinating Officials of the department. :

The Study Team expresses its sincere thanks and gratitude to **Sh. R.A.Yadav Dy.CME (C), Sh.-Vikas Agrawal WM and Sh.-Deepak Damor APE, for their valuable guidelines**. The work study team is also thankful to Sh. **M.S. Godara & Sandeep Nirwan, SSE Planning and Sh. Yad Ram Meena SSE Incharge Machine Shop & Wheel Shop, Sh. Vishnu Jinger, SSE Wheel Shop** and staff working with him for rendering their full co-operation during the course of time study and supplying necessary data and information to formulate the time study in the desired direction.

2.2 Terms of Reference:

This study has been conducted under the following terms of reference:

i) As advised by Railway board, SDGM has desired to conduct time study for assessment of man hours of Wheel Shop of Carriage Workshop, Ajmer.

ii) This was necessitated due to technology up gradation in machines and plants to manufacture and repair the wheels & axles for ICF design coaches.

iii) Suggesting the ways and means for improving the system economically and efficiently.

2.3 Methodology Adopted:

The following techniques of method study as well as work measurement have been applied to conduct the study:

i) Data collection and its critical analysis to arrive on factual status of present working.

ii) Analyzing effect of introduction of improved technology in work process.

iii) Holding discussions at various levels with a view to produce fruitful results.

iv) Sample checks and spot observations.

2.4 Field units visited:

Work study team has visited in Carriage workshop, Ajmer.

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CHAPTER-3	**SYNOPSIS**

Indian Railway is the biggest transport organization in India and playing an important role in the development and economy of the country. Along with the Commercial activities, the Railways have to fulfill the social obligations also, especially in the time of natural calamity and towards the weaker sections of the society. For the healthy existence of such an important organization it is necessary to be financially viable, which can be achieved by ensuring optimum utilization of the resources i.e. Man, Material and Machinery**.**

With the implementation of 7th pay commission, **the establishment charges have gone up drastically and hence manpower has become an important factor in bringing economy in the system**. In order to check the cost of manpower, the Railway administration issues guidelines from time to time, in the form of **yardsticks, circulars etc. Now-a-days, benchmarking is being utilized to ensure best utilization of manpower**. **Benchmarking is a continuous process of comparing different units and identifying which one is the best in the business, followed by learning how this excellence was achieved** and then setting out to improve the efficiency of those units, which were left behind. The optimum utilization may further be ensured by **multi skilled use of man power**. With the introduction of **computers in the offices, paper activities has been reduced considerably** resulting in further **possibilities of diminution in manpower has become mandatory** due to lesser manual exercise in all the offices over entire railways.

Productivity has acquired a new and broader meaning in the light of highly competitive economic environment, increasing educational levels, degradation of physical environment and increasing population, creating pressure on the limited available resources.

All efforts should be made to ensure that the revenue is spent carefully over assets, infrastructure and manpower. In other words, Railway administration should curtail wasteful expenditure in operational and maintenance costs so as to bring down the operating ratio which is the prime indicator of Railway's financial efficiency.

Keeping in view of the above mentioned factors and as advised by Railway Board, the SDGM/NWR has approved a Time Study of wheel shop/s activities of carriage workshop, Ajmer.

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CHAPTER-4	DETAIL OF STAFF AND MACHINES

4.1 There are two workshops at Ajmer viz. Ajmer (Carriage) and Ajmer (Loco). **Sh. R. K. Moondra, CWM,** is **overall incharge** of these workshops. **Ajmer (Carriage) workshop** is headed by **Sh. R.A.Yadav, Dy.CME** and their assisting officers Sh.- Vikas Agarwal, WM and Sh. Deepak Damor, APE is looking after the POH outturn of both design (ICF & LHB) coaches and other works.

4.2 Workshop Timings:

Working time of Carriage Workshop is as under:

Sr. No.	Shifts	Monday to Thursday	Friday	Saturday
1.	Morning shift	07.00 to 11.00 hrs.	07.00 to 11.00 hrs	07.00 to 11.00 hrs
2.	Lunch Break	11.00 to 12.00 hrs.	11.00 to 12.00 hr	-
3.	Afternoon shift	12.00 to 17.00 hrs	12.0 o 16.00 hrs	-

4.3 Monthly average outturn targets (2019-20) :

Sr. No.	*Activity*	*Target Outturn*
1.	AC Coach POH (ICF)	27
2.	Coach POH Non–AC (ICF)	72
3.	SS-2/3 LHB Coach POH	16
Total		**115**

4.4 Monthly average Outturn (2019-20):

Sr. No.	*Activity*	*POH Outturn*
	AC Coach POH	26.41
	Coach POH Non–AC	71.25
	SS-2/3 LHB Coach POH	14.66
Total		**112.32**

4.5 Detail of Machines and plants which situated in Wheel Shop:

Sr. No.	Machine No.	Name of Machine	Activity is done on Machine
1.	220/34	Axle turning lathe	Wheel seat turning
2.	244/34	Axle turning lathe (BECO)	Axle turning
3.	253/34	CNC axle turning lathe	New axle turning
4.	236/34	VTL-150 Facing & boring of disc	Wheel disc boring
5.	205/34	VTL-100 Facing & boring of disc	Wheel disc facing
6.	252/34	CNC- Surface wheel lathe (Turning of wheel sets)	Wheel profile turning
7.	246/34	AJTB & wheel turning lathe journal polishing (HYT)	Axle journal polishing
8.	202/34	Wheel press MFD (750T) press on & off	Wheel press off
9.	254/34	CNC-VTL (HYT)	LHB wheel disc boring
10.	256/34	CNC wheel press	Wheel press on
11.	257/34	Electromagnetic crack detector	MPT
12.	258/34	Dynamic wheel balancing	LHB wheel balancing
13.	259/34	EOT crane	Material handling
14.	260/34	New CNC surface wheel lathe	Wheel profile turning

4.6 Cadre position of staff:

Present 06 SSEs /JEs and 68 Artisan & Khalasis are sanctioned for Wheel Shop at Carriage Workshop, Ajmer. Detail of these staff is given below:

4.6.1 Cadre position of SSEs/JEs:

Sr. No.	Category	Pay Band	Grade Pay	Sanctioned	On roll	Vacancy
1.	SSE	9300-34800	4600	5	5	0
2.	JE	9300-34800	4200	2	2	0
Total				**7**	**7**	**0**

4.6.2 Cadre position of Artisan and Khalasi staff:

S.N.	Category	Pay Band	Grade Pay	Sanctioned	On Roll	Vac.	Exc.
1.	MCF Fitter	9300-34800	4200	2	2	0	0
2.	Fitter Gr.I	5200-20200	2800	3	1	2	0
3.	Fitter Gr.II	5200-20200	2400	1	3	0	2
4.	Fitter Gr.III	5200-20200	1900	0	4	0	4
5	MCF Fitter-M	9300-34800	4200	12	10	2	0
6	Fitter Gr.I – M	5200-20200	2800	30	5	25	0
7	Fitter Gr.II – M	5200-20200	2400	3	5	0	2
8	Fitter Gr.III- M	5200-20200	1900	4	0	4	0
9	MCF Welder	9300-34800	4200	1	1	0	0
10	Welder – Gr.I	5200-20200	2800	1	1	0	0
12	PMA Gr.I	5200-20200	2800	1	0	1	0
15	Khalasi	5200-20200	1800	10	5	5	0
Total				**68**	**37**	**39**	**8**
Total of effective vacancies				**31**			

4.7 Deployment & duties of above mentioned on roll staff:

4.7.1 Supervisory Staff:

Sr. No.	Shop/ Section	Total staff	Brief Description
1.	Wheel shop & Machine	**01**	Over all in-charge of the Wheel and Machine Shop.
2.	Wheel shop	**01**	In-charge of Wheel Shop
3.	Wheel Repair Section	**02**	Supervision of Wheel Repair Section.
4.	Wheel Manufacturing Section	**03**	Supervision of Wheel Manufacturing Section. (01 SSE is looking after only press activity.)
TOTAL		**07**	

4.7.2 Artisan and Helper Khalasi Staff of Wheel Shop:

Sr. No.	Section	DW	EIW		NI		Total	Brief Description
			Art.	Kh	Art.	Kh		
1.	Wheel Repair & Manufacturing Section	23	9	4	0	1	**37**	Wheel turning, journal polishing, and wheel seat turning, condom wheel disc cutting, wheel stamping etc. New axle complete turning, wheel disc boring, press on mounting wheel, press off dismounting, wheel disc boring, wheel disc facing, new axle rough turning. Drilling & tapping of axles (new axle), re drilling & tapping in axles (repairable wheel sets), scrap disposal of wheel & axle, turning boring, material handling wheel disc, axles, gas etc.

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CHAPTER– 5	WORKLOAD, CRITICAL ANALYSIS & OSERVATIONS

5.0 Time study of wheel manufacturing and repairing operations:

During the course of time study, the team observed activities being performed & collected the requisite data of all the activities and discussed ongoing activities carried out by staff in Wheel Shop of Carriage Workshop, Ajmer and critically analyzed the same. Various meetings were held with individual shop floor SSEs/JEs for available workload, deployment of staff and sequence of operations with a view to ascertain whether cycle time of shop activity can be reduced or not. Actual allowed time has been calculated by time study, sample checks & spot observations of the following activities:

5.1 Remove/scrap dust from wheel for stamping particulars:

5.1.1 General detail of operation:

Name of Item	**Wheels (ICF)**	Name & No. of Machine	**Manual**
Name of Operation	**Remove/Scrap dust**	Name of Operator	**Prince Verma/MCF**
Time On	**11:10**	Time Off	**11:31**

5.1.2 Operation time calculation:

(A) Normal Time:

Sr. No.	Elements	Effective Time		Rating of Operator	No. of worker	Normalized Time
		Hrs.-Min.	Hrs.			
1.	Remove/scrap dust from wheel for stamping particular.	00-22	00.367	80	01	00.367

(B) Allowed Time:

NT (A)	Allowances				AT (Hrs.)	AT (Hrs.-Min.)
	Fatigue (B)=Ax12 %	Contingency (C)=(A+B)x10%	Gauging (D)=(A+B+C)x5%	Incentive bonus (E)=(A+B+C+D)x33.33%		
0.367	0.044	0.041	NA	0.151	0.602	00-36

5.1.3 Time save after conducting time study:

Allowed Time given on P-1 Sheet (Hrs.-Min.)	Allowed time after work study (Hrs.-Min.)	Time saved by time study (Hrs.-Min.)
41	36	05

5.2 Axle journal dressing & burnishing

5.2.1 General detail of operation:

Name of Item	**Wheels & Axle (ICF)**	Name & No. of Machine	**AJTB 246/34**
Name of Operation	**Axle journal polishing**	Name of Operator	**Hitesh Botra/ Ft(M)-I**
Time On	**11:05**	Time Off	**11:21**
			

5.2.2 Operation time calculation:

(C) Normal Time:

Sr. No.	**Elements**	**Effective Time**		**Rating of Operator**	**No. of worker**	**Normalized Time**
		Hrs.-Min.	**Hrs.**			
1.	**Axle journal dressing & burnishing:** Hold old ICF axle with chuck on AJTB lathe, Prepared axle diameter from 130.140 mm to 130.053 mm by 02 and 03 cuts and after this prepared finish of N6 microns by filing and brushing.	00-22	00.367	80	01	00.367
		Allowed time for removing ovality from 10% axle journal by machining and polishing.				
		00.50	00.83	80	01	00.83

(D) Allowed Time:

NT (A)	**Allowances**				**AT** (Hrs.)	**AT** (Hrs.-Min.)
	Fatigue (B)=Ax12%	Contingency (C)=(A+B)x10%	Gauging (D)=(A+B+C)x5%	Incentive bonus (E)=(A+B+C+D)x33.33%		
0.367	0.044	0.041	0.023	0.158	0.632	00-38
Allowed time for removing ovality from 10% axle journal by machining and polishing.						
00.767	0.092	0.086	0.047	0.331	1.322	01-19
Total average allowed time for both activities						
0.407	0.049	0.046	0.025	0.175	0.701	00-42

5.2.3 Time save after conducting time study:

Allowed Time given on P-1 Sheet (Hrs.-Min.)	**Allowed time after work study** (Hrs.-Min.)	**Time saved by time study** (Hrs.-Min.)
00-59	00-42	00-17

5.3 Pressing on ICF wheel:

5.3.1 General detail of operation:

Name of Item	**Wheels & Axle (ICF)**	Name & No. of Machine	**CNC SWL 256/34**
Name of Operation	**Pressing On**	Name of Operator	**Kuldeep/ Ft(M)-I** **Gulab Chand/ Ft(M)-III**
Time On	**14:35**	Time Off	**15:30**
			

5.3.2 Operation time calculation:

(A) Normal Time:

Sr. No.	**Elements**	**Effective Time**		**Rating of Operator**	**No. of worker**	**Normalized Time**
		Hrs.-Min.	**Hrs.**			
1.	Surface preparation of wheel seat and bore, mounting JNL cap proper fitment of disc-I	00-15	0.25	80	02	0.50
2.	Press on both disc by using appropriate operation.	00-27	0.45	80	02	0.90
3.	Dismantling JNL cap and check all dimensions manually.	00-15	0.25	80	02	0.50
Total		00-57	0.95	80	02	1.90

(B) Allowed Time:

NT (A)	Allowances				AT (Hrs.)	AT (Hrs.-Min.)
	Fatigue (B)=Ax12%	Contingency (C)=(A+B)x10%	Gauging (D)=(A+B+C)x5%	Incentive bonus (E)=(A+B+C+D)x33.33%		
1.90	0.228	0.213	0.117	0.819	3.277	03-17

5.3.3 Time save after conducting time study:

Allowed Time given on P-1 Sheet (Hrs.-Min.)	**Allowed time after work study** (Hrs.-Min.)	**Time saved by time study** (Hrs.-Min.)
03-49	03-17	00-32

5.4 Pressing off wheel from axle (ICF):

5.4.1 General detail of operation:

Name of Item	**Wheels & Axle (ICF)**	Name & No. of Machine	**CNC SWL 256/34**
Name of Operation	**Press Off**	Name of Operator	**Mahendra Kumar/MCF(M)** **Khushwant Singh F(M)-II**
Time On	**12:25**	Time Off	**13:09**
			

5.4.2 Operation time calculation:

(A) Normal Time:

Sr. No.	**Elements**	**Effective Time**		**Rating of Operator**	**No. of worker**	**Normalized Time**
		Hrs.-Min.	**Hrs.**			
1.	Press off both ICF wheel disc., wheel mounting on machine then press off one wheel from axle about 50 to 60 tonnes load. After that turn axle side for press off other wheel and axle and wheel dismounting from machine.	00-48	0.800	80	02	1.600

(B) Allowed Time:

NT (A)	Allowances				AT (Hrs.)	AT (Hrs.-Min.)
	Fatigue (B)=Ax12%	Contingency (C)=(A+B)x10%	Gauging (D)=(A+B+C)x5%	Incentive bonus (E)=(A+B+C+D)x33.33%		
1.600	0.192	0.179	0.099	0.690	2.760	02-46

5.4.3 Time save after conducting time study:

Allowed Time given on P-1 Sheet (Hrs.-Min.)	**Allowed time after work study** (Hrs.-Min.)	**Time saved by time study** (Hrs.-Min.)
03-34	02-46	00-48

5.5 Wheel Seat Turning on ICF axle:

5.5.1 General detail of operation:

Name of Item	**Old Axle ICF design**	Name & No. of Machine	**ATL 220/34**
Name of Operation	**Wheel Seat Turning**	Name of Operator	**Vibhishan Jogi/ Ft(M)-I**
Time On	**11:40**	Time Off	**13:00**

5.5.2 Operation time calculation:

(A) Normalized Time:

Sr. No.	**Elements**	**Effective Time**		**Rating of Operator**	**No. of worker**	**Normalized Time**
		Hrs.-Min.	**Hrs.**			
1.	Mounting ICF axle on machine, Turn on axle of both sides for wheel seat with final finishing by filing and amry paper and dismounting the axle from machine.	01-27	01.450	80	01	01.450

(B) Allowed Time:

NT (A)	Allowances				AT (Hrs.)	AT (Hrs.-Min.)
	Fatigue (B)=Ax12%	Contingency (C)=(A+B)x10%	Gauging (D)=(A+B+C)x5%	Incentive bonus (E)=(A+B+C+D)x33.33%		
1.450	0.174	0.162	0.089	0.625	02.501	02-30

5.5.3 Time save after conducting time study:

Allowed Time given on P-I Sheet (Hrs.-Min.)	**Allowed time after work study** (Hrs.-Min.)	**Time saved by time study** (Hrs.-Min.)
03-03	02-30	00-33

5.6 Wheel & Axle received and supplies by wheel shop:

Year	**Wheel set**		**New axle received**	**New wheel disc received**
	Received	**Supplied**		
2018-19	9418	9268	182	3139
2019-20	8330	8191	170	2713
2020-21 (up to Nov.20)	3514	3507	43	983
Total	**21262**	**20966**	**395**	**6835**

5.7 Total monthly average outturn of following activities:

Sr. No.	**Operation**	**Machine No. & Name**	**Unit**	**Total** (Nos.)
1.	Remove dust	Manual	Wheel set	**650**
2.	Journal Polishing	AJTB 246/34	Axle	**272**
3.	Press on	CNC SWL 256/34	Wheel set	**123**
4.	Press off	MDF Wheel Press 202/34	Wheel set	**133**
5.	Wheel seat turning	ATL 220/34	Axle	**123**

5.8 Total Allowed Time saved due to time study:

Sr. No.	Operation	Machine No. & Name	Unit	Allowed Time given on P-1 Sheet	Allowed Time as per Time Study	Time saved (Hrs./Min)	Total average outturn/ month (Nos.)	Total time saved (Hrs.)
1.	Remove dust	Manual	Wheel set	00-41	00-36	**00-05**	**650**	54.16
2.	Journal Polishing	AJTB 246/34	Axle	00-59	00-42	**00-17**	**272**	77.06
3.	Press on	CNC SWL 256/34	Wheel set	03-49	3-17	**00-32**	**123**	65.60
4.	Press off	MDF Wheel Press 202/34	Wheel set	03-34	02-46	**00-48**	**133**	106.40
5.	Wheel seat turning	ATL 220/34	Axle	03-03	02-30	**00-33**	**123**	67.65
Total Allowed time saved in man hours								**370.87**

5.0 Total Man hours required per worker in a month:-

(a)	No. of working days in a month	25 days.
(b)	No. of duty hours in a day	08 hours.
(c)	No. of man hours in a month	25X8 = 200 man hrs.
(d)	Man hours in a month as incentive bonus 33.33%	200X33.33%= 67 man hrs.
(e)	**Total man hours per worker in a month (200+67)**	**267 Man hours.**

5.1 Total Allowed time Saved after time study:

(a)	Allowed time saved per month.	370.87 say 371 man hrs.
(b)	Man hours/DW/month in CLW Incentive Scheme.	267 hours.
(c)	Saved DW for above man-hours	371 / 267 = 1.39 Nos.
(d)	Saved EIW @10 % of DW	1.39 X 10% = 0.14 Nos.
(e)	Saved total DW+EIW	1.39+ 0.14 = 1.53 Nos.
(f)	Saved Leave Reserve @12.5%	1.53 X 12.5% = 0.19 Nos.
(g)	Total manpower saved	1.53+0.19 = 1.72 Nos. Say 02

5.2 Increasing in productivity:

Sr. No.	**Operation**	**Machine No. & Name**	**Unit**	**AT given on P-1 Sheet** (Hrs./Min)	**AT as per Time Study** (Hrs./Min)	**Time saved** (Hrs./Min)	**Increase Productivity (%)**
1.	Remove dust	Manual	Wheel set	00-41	00-36	**00-05**	**12.19**
2.	Journal Polishing	AJTB 246/34	Axle	00-59	00-42	**00-17**	**28.81**
3.	Press on	CNC SWL 256/34	Wheel set	03-49	3-17	**00-32**	**13.97**
4.	Press off	MDF Wheel Press 202/34	Wheel set	03-34	02-46	**00-48**	**22.42**
5.	Wheel seat turning	ATL 220/34	Axle	03-03	02-30	**00-33**	**18.03**
Increasing average productivity				12-06	09-51	**02-15**	**19.00**

5.3 Observations:

Work study team visited Wheel Shop of Carriage Workshop, Ajmer and discussed ongoing activities carried out by workers in this shop. Method and sequence of operations of activities were discussed with SSEs with a view to ascertain whether operation time of the wheel manufacturing and repairing activities can be reduced or not. Allowed time has been calculated on the basis of actual operational time of the total 05 activities of wheel

manufacturing and repairing. As consequence 371 hours per month are proposed to save. **This will further lead to-**

(A) 02 manpower will save while performing these activities with revised allowed time.

(B) Payment of incentives bonus will also be saved on these man hours.

(C) Average19% productivity has been increased on these activities.

5.4 Recommendations:

(A) It is being advised by work study team that the workload of 02 posts have been reduced due to saving of 371 man hours. Therefore, 02 posts of Artisan staff have been considered surplus and advised to surrender.

(B) It is also being advised by work study team that the computation sheets (P-1) of these activities to be revised as per time study report and the calculation of Incentive bonus should be done on the basis of revised sheets.

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CHAPTER 6	SUMMARY OF RECOMMENDATION

6.1 Summary of recommendations is as follows:

Sr. No.	Recommendations	Para no.	Accepting/ Implementing Authority
1.	Work study team visited Wheel Shop of Carriage Workshop, Ajmer and discussed ongoing activities carried out by workers in this shop. Method and sequence of operations of activities were discussed with SSEs with a view to ascertain whether operation time of the wheel manufacturing and repairing activities can be reduced or not. Allowed time has been calculated on the basis of actual operational time of the total 05 activities of wheel manufacturing and repairing. As consequence 377 hours per month are proposed to save. ➢ **It is being advised by work study team that the workload of 02 posts have been reduced due to saving of 371 man hours. Therefore, 02 posts of Artisan staff have been considered surplus and advised to surrender.** ➢ **It is also being advised by work study team that the computation sheets (P-1) of these activities to be revised as per time study report and the calculation of Incentive bonus should be done on the basis of revised sheets.**	**5.0**	**CWM/AII**

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7.0 Minutes of meeting which held in the chamber of with Dy. CME(C), Ajmer on 00.01.2021:

The recommendations of time study report for wheel manufacturing and repairing activities of Ajmer carriage workshop were briefed and discussed with Dy. CME (C) by Work Study Team.

The time study was carried out as per instructions of Railway board due to up gradation in technology of machine and plants. After conducting time study the following observations have been highlighted:

(A) 02 manpower will save while performing these activities with revised allowed time.

(B) Payment of incentives bonus will also be saved on these man hours.

(C) Average19% productivity has been increased on these activities.

Dy.CME (Carriage) has agreed to surrender 02 posts from the cadre of Wheel shop and for circulating revised computation sheets (P-1) of these activities on the basis of time study report and the calculation of Incentive bonus on the basis of revised sheets.

07/01/21

DY.CME(C)/AII

K. K.Meena/CWSI/JP

R.S. Khiria/WSI/JP

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CHAPTER-8	**FINANCIAL IMPLICATIONS**

8.1 FINANCIAL IMPLICATIONS:

With the proposal for surrender of **02 posts** at Artisan staff from cadre of wheel shop of carriage workshop, Ajmer. The recurring savings per annum in money value amount is given as below:-

Sr. No.	**Category**	**Pay Band**		**Mean Pay**	**DA @ 17%**	**Total Pay**	**No. of posts**	**Total saving per month** (Rs.)	**Total saving per year** (Rs.)
1.	Fitter (M) Gr.-I	29200	38100	33650	5720	39370	02	78740	944880

Total recurring savings of 02 surplus posts is Rs.09.45 lakhs.

Note:

Payment of incentives bonus will also be saved on 371 man hours.

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Annexure-A

LIST OF ABBRIVATIONS

Sr. No.	Abbreviation	Description of Abbreviation
1.	MG	Meter Gauge
2.	BG	Broad Gauge
3.	POH	Periodical Overhauling
4.	IOH	Intermediate Overhauling
5.	C&W	Carriage & Wagon
6.	ICF	Integral coach factory
7.	LHB	Linke hofmann busch
8.	CNC	Computerized numerical controlled
9.	EOT	Electric Overhead travelling crane
10.	DW	Direct worker
11.	EIW	Essential indirect worker
12.	NI	Non Incentive Worker
13.	Art.	Artisan
14.	Kh.	Khalasi
15.	AT	Allowed time
16.	NT	Normal Time
17.	NA	Not applicable
18.	MCF	Master craft man
19.	ATL	Axle turning lathe
20.	CLW	Chittaranjan Locomotive Works
21.	AJTB	Axle journal turning & burnishing

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