

WEST CENTRAL RAILWAY



WORK STUDY REPORT

ON

*“Review of staff strength of Artisan Category of
S&T Deptt. of BPL division”*

STUDY PERSONNELS

Tulsi Singh

Astt. Work Study Officer

Rajesh Kumar

Chief Work Study Inspector

WORK STUDY ORGANISATION -
JABALPUR

SYNOPSIS

Indian Railway is one of the biggest transportation organizations among all other transport organizations in the country. In fact, Railway is backbone of the country's transport systems. In the recent time, 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.

In Railways, the process of absorption of modernization has been started and still in progress in every sphere of the system. As a result of which certain activities have become fully redundant/ obsolete from existing system. These technological up gradations have shown the considerable improvement in the efficiency and manpower productivity in Railways.

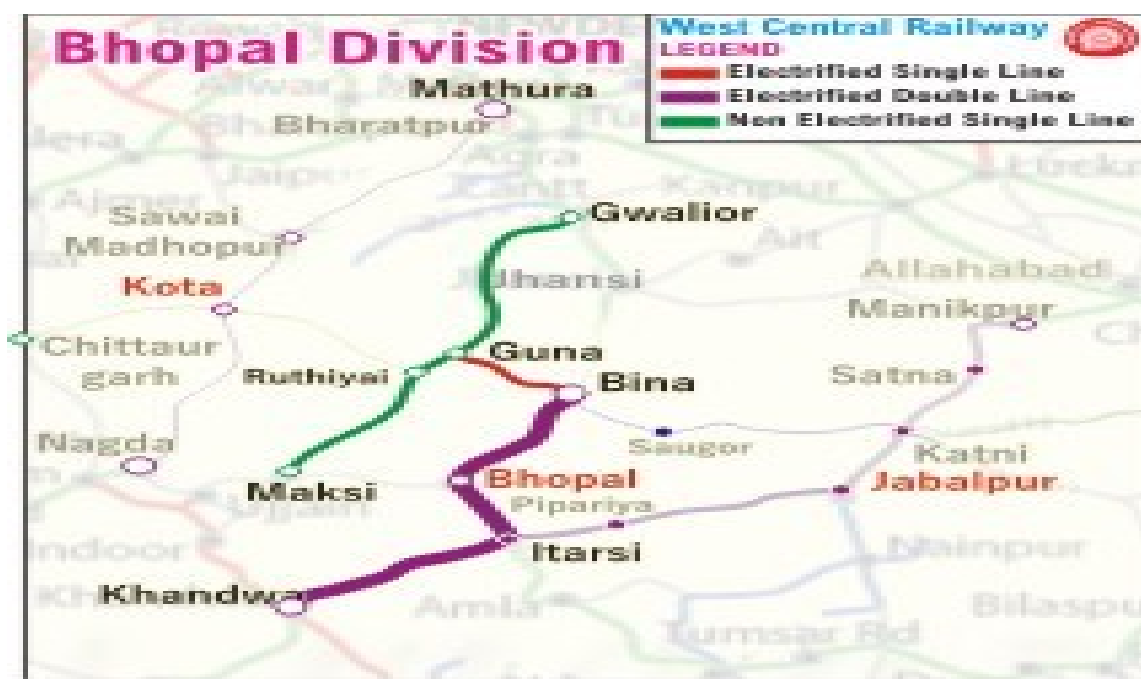
The S&T department plays a vital role in Indian Railways. Each departments of Indian Railway is closely related with others, with the help of telecommunication and signals are the base of the operation of a rolling stock safely and timely. Signal & Telecommunication department is very essential in day to day working of Indian Railway.

Keeping in view, all these constraints, Work Study Cell is assigned to conduct work study of ***“Review of cadre of Artisan category of S&T department of Bhopal division”*** with a view to assess the staff requirement as per the existing workload after technological up gradation and outsourcing. To arrive at the actual requirement of staff, the team held discussions with officers and supervisors of this division.

CHAPTER-I

1. INTRODUCTION

- 1.1 Work study on “Review of cadre of Artisan category of S&T department of Bhopal division” has been undertaken as a “Crash work Study” for the year 2019-20.
- 1.2 Bhopal division was formed on 1 April 1952 as part of then the Central Railway. It is the second largest division of West Central Railway in terms of route kms, employee strength and freight earning. It has total 95 stations of different categories.



- 1.3 Total route and track kilometerage of Bhopal division are 1016 and 1921, respectively. Track is also supported by total 1587 bridges of all dimensions. The geographical extension of Bhopal division lies completely in the state of Madhya Pradesh and on the map of Indian Railways is Khandwa (excluding) - Itarsi double line electrified BG Sec.; Itarsi - Bina double line electrified BG Sec.;

Bina - Guna single line electrified BG Sec.; Guna - Gwalior (excluding) single line non-electrified BG Sec.; Ruthiyai - Maksi (excluding) single line non-electrified BG Sec.

- 1.4** Some important ongoing works falling in Bhopal division are new lines on Ramganjmandi-Bhopal Sec. (262 Km.); doubling of Bina-Ruthiyai-Kota Sec. (282 Km.) and tripling project of Bina-Habibganj-Barkheda-Budni-Itarsi Sec.(total 242 Km). Habibganj station has been chosen under Station Redevelopment Programme.

- 1.5** Signal & Telecommunication department consist with-

1. Signals
2. Telecommunication wings

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- 1.6** Telecommunication section is responsible for provision of telephone and all related accessories like lines, telephone exchanges etc. Telecommunication department is also responsible for maintenance of all these assets and provide uninterrupted communication.

- 1.7** Signal department is responsible for provision of signaling systems, interlocking gears and block instruments as prescribed at the each stations and yards of the division. This department is also responsible for maintenance of all these instruments.

CHAPTER-II

2. REQUIREMENT OF STAFF

2.1 Bhopal division is having route kilometer of 1012.75 km with following sections.

Khandwa	- Itarsi	183.42 km.
Itarsi	- Bhopal	91.65 km.
Bhopal	- Bina	138.38 km
Bina	- Pabai	58.150 km.
Bina-Guna	- RTA-MKC-GWL	332.64 km.
Guna-Shivpuri	- Gwalior	227.46 km.

Signal and Telecom department functioning at above mentioned section of **91** stations, yards and all offices of the division.

2.2 Sanctioned Strength & On Roll position of S&T department of Artisan category staff of BPL division as follows: (as on 27.11.2018)

Category	Pay Band	S.S.	M.O.R	VAC.
MCM/Blacksmith	4200	05	04	01
Blacksmith-I	2800	13	04	09
Blacksmith-II	2400	06	04	02
Blacksmith-III	1900	10	10	0
Total		34	22	12
MCM/Paintar	4200	01	01	0
Painter-I	2800	01	01	0
Painter-II	2400	02	01	01
Painter-III	1900	01	02	+1
Total		05	05	0
MCM/Carpenter	4200	01	0	01
Carpenter-I	2800	02	01	01
Carpenter-II	2400	01	01	0
Carpenter-III	1900	01	03	+2
Total		05	05	0
Hammerman	1900	03	0	03
Total		03	0	03
Mason	2400	01	01	0

Total		01	01	0
C/Jointer	4200	01	-	01
C/Jointer-I	2800	03	01	02
C/Jointer-II	2400	01	0	01
C/Jointer-III	1900	01	04	+3
Total		06	05	01
G.tatal		54	38	16

It may be seen from the above table, 54 posts have sanctioned, 38 posts are MOR and 16 posts are vacant.

Artisan staff:

In brief, Artisan staff performs their duties both in Signal & Telecom and their duties are relevant to that trade/designation i.e. assisting/carrying out the work of painters doing painting works, Blacksmith doing smithy works, carpenter doing carpentry works etc.

2.3 Duties of Artisan staff:

2.3.1 Blacksmith:

Duty of Black Smith in the SSE/SI's is fairly wide. The main duties of Black Smith are as under:

1. Preparation of tools.
2. Attention and compliance of points and crossing inspection.
3. Smithy work in signal post, points and crossing zone as per the requirements.
4. Other allied work time to time.

They also entrusted to fix the rolling sheet, cutting metal pipes and ancillary works in engineering department due to contractual work load of this category is on decreasing trend.

2.3.2 Carpenter:

The main duties of Carpenter are as under:

1. Preparation and adjusting wooden layouts Points and Crossing rail screw prodding and tightening of wooden blocks.
2. Preparation of Battery Box.

3. Preparation and alteration work in relay rake, location box.
4. Other allied carpentry works in the section.

The doors of boxes and others are altering either by PVC or Iron, therefore the workload of Carpenters is reducing drastically.

2.3.3 Painter:

The main duties of Painter are as under:

1. He is responsible for all the painting works in the concerned jurisdiction.
2. Painting works includes painting of signal posts, numbering of track circuits and other allied painting works in the section of SSE/SE.

It has been noticed that presently these works are accomplished by engaging the contractor/agency. Hence, this category is of no viable importance.

2.3.4 Mason:

The main duties of Masons are as under-

1. Repairing of location boxes
2. Repairing of offices
3. Repairing of store room etc.

2.3.5 Cable Jointer:

The main duties of Cable Jointers are as under-

1. Joints the cable in insulated power supply.
2. Installed in underground pipes & trenches.
3. Responsible for installation and maintenance of underground and high voltage overhead electrical cable supplies.

This work can be done by private contractors. This is physically demanding job. Work in outdoor, sometimes in cramped and confined conditions or at heights. Contract labour can do this type of work easily.

2.6 Brief descriptions of Blacksmith/Hammerman :

A significant amount of development is taking place throughout Indian Railways in signalling. Not only this development in new technologies but also in the philosophies behind making the Railway Organisations financially viable.

In olden days for maintenance of mechanical lever frame/points/LC gates, attending S&T failures, B/Smith & Hammerman was posted in various S&T units because those days sufficient facility were not equipped with. But now-a-days BS/HM are not utilised for smithy work as mechanical lever/points/gates are replaced by motor operated points, electrical gates, CLS. Hence, at present service of B/Smith & Hammerman is no longer required. At present, B/Smith & Hammerman are utilised as assisting Signal Maintainer during routine maintenance activities and repair of the same while occurrence of failures and breakdowns as per requirement of the S&T department. Moreover, it is observed that, no smithy activities are being done by the Blacksmith staff.

2.7 WORKING OF BLACKSMITH/HAMMERMAN:

i) LC gates maintenance and their repair during breakdown is done normally by Blacksmiths of Signal Department. The important functions are:

- Rod adjustment,
- Maintenance of Swing gate locks assembly.
- Maintenance of Lever frames.
- Boom attention and replacement.

ii) Maintenance and repair of:

- E Type locks assembly at location boxes and
- Shunting permitted indicators.

iii) Smithy work in connection with Motor operated points and Mechanical Points.

iv) Country made tools like chisels, punches and centre punches are made and sharpened in the course of usage.

2.8 Critical Analysis:

2.8.1 Multi Skilling of Artisan Staff :- Multi skilling should be encouraged for artisans and the following combinations of skills can be considered: Plumber cum mason, Carpenter cum mason, Fitter cum welder.

Since, the maintenance work requires multi skilled artisans, to avoid delays for want of other skilled man, it is necessary that multi skilling for artisans should be introduced.

As per RB letter no. E(MPP)2016/1/59 dtd 10.01.2017, Multi-skilling can be planned from the initial stage itself in new activities in Depot. The new activities even in the older establishments can be encouraged by calling for suggestion from employees and employee Unions. This will lead to huge reduction in costs and increased productivity. Multi skilling should be encouraged for artisans' category. To avoid delays for want of other skilled man, it is necessary that multi skilling for Artisans should be introduced.

2.8.2 Outsourcing of major maintenance in work department, thereby reducing the departmental work.

2.8.3 Yardstick: -In olden days, when these yardsticks were come into force, all these activities were managed by the depots' staff itself. However, now a day's Zonal Contracts are introduced to make easy and procurement of required material to achieve the early performance in a satisfactory level without the help of our labour, as we are under going into these contracts for early achievement along with an intention to save some work force. Yardsticks have become outdated and not suggestible to implement in Signal and Telecommunication Organization from the date when the Zonal Contracts for the activities have been introduced.

2.9 Benchmarking: (Je'kfDr mRikndrk vuqikr flracj&2018 dh fjiksVZ ds vuqlkj)

Comparative figures of benchmarking of S&T staff in different divisions of Indian Railways: (in Divisional Integrated Signaling & Telecom Units)

Signal:

SN	Railways	Depot	Men per DISTUs
1	IR	-	2.92
2	WCR	BPL	1.70
3	Benchmark	AGC of NCR	0.58

Telecom:

SN	Railways	Depot	Men per DISTUs
1	IR	-	1.24

2	WCR	BPL	1.58
3	Benchmark	BSB of NER	0.54

As per above, WCR is far behind from benchmarking of Indian Railway.

Benchmarking is based on dynamic and comparative analysis and is a useful tool to manage efficient deployment of staff and monitor effects of improvement in working practices, use of new technologies and level of outsourcing.

- 2.10** It is seen that most of the repairs and maintenance activities, major masonry & carpentry works are catered to by the Zonal contract. Therefore, the requirement of staff assessed through the yardstick formula cannot be applied, since there is enormous outsourcing. The departmental activity has been confined to attending minor repairs and maintenance works.

Blacksmith entrusted to fix the rolling sheet, cutting metal pipes and ancillary works in S&T department due to contractual work load of this category is in decreasing trend.

Carpentry, the doors are altering either by PVC or Iron, therefore the workload of Carpenters is reducing drastically.

Painter, It has been noticed that presently these works are accomplished by S&T department's contractor/agency. Hence, this category is of no viable importance.

In light of above facts, the requirement of Artisan staff has been reduced. As observed by Work study Team, following posts which are redundant and may be surrendered immediately:

SN	Designation	SS	MOR	VAC	Excess <i>observed by WS team</i>
1	Black smith	34	22	12	12
2	Carpenter	05	05	00	05
3	Painter	05	05	00	05

4	Hammerman	03	00	03	03
Total		47	32	15	25

2.11 Conclusion:

Modification of Signal and Telecommunication department is required as like as others. Also benchmarking figures are in higher side. So, need to outsource of more Artisan staff work activities as Work Study team observed.

2.12 Recommendation:

After outsourcing work and zonal contract work, work done of artisan staffs are gradually diminishing day to day. Hence, 25 posts of artisan category staff seem to be redundant and should be surrendered immediately.

CHAPTER-III

3

FINANCIAL IMPLICATION

- 3.1** On surrender of 25 posts of Artisan category of S&T department on Bhopal division, financial implication will be as under-

Particular	Amount
Mean of grade	41,550
DA@9%	3740
Transportation	1800
Salary Per Month	47,090
X 12 = Per annum	5,65,080
X No. of posts (25)	1,41,27,000
Say	1.41 Crores

Say Rs 1.41 Crore Per Annum

On surrender of above 25 posts, the anticipated saving works out to **Rs. 1.41 Crore per annum.**



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