

WEST CENTRAL RAILWAY



WORK STUDY REPORT ON

“Review of staff strength of Electrical General department of
Jabalpur division”

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**WORK STUDY ORGANISATION -
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EXECUTIVE SUMMARY

Name of work study	Review of staff strength of Electrical General department of Jabalpur division.
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Sanctioned strength, men on roll and vacancy position of staff is as under:-

Category	S.S.	M.O.R.	VAC.
SSE	20	20	00
JE	10	09	01
MCM (OSM) Sr. Tech	41	32	09
OSM-I	80	48	32
OSM-II	12	06	06
OSM-III	22	45	-23
Ch.OS+OS	04	02	02
MCM	35	29	06
GD-I (ACCM)	69	49	20
GD-II (ACCM)	10	10	0
GD-III (ACCM)	19	44	-25
Helper	164	162	02
Total	486	456	30

It may be seen from the above that the 486 men are on roll against 456 sanctioned posts and 30 posts are lying vacant in artisan category.

Activities of Technician & Helper of power group:

1	Manning of substation.
2	Operation and maintenance of DG set.
3	Operation and maintenance of pump set.
4	Breakdown maintenance and regular maintenance of cable and other electrical assets.
5	Schedule maintenance of transformer.
6	Maintenance of ACs, water coolers, refrigerators, etc.

7	Failure attendance and replacement of light, fan, socket, switches, etc.
8	Maintenance of street light and high mast light.
9	Provision of new points for electric connection.
10	Overhead wire changing and tree cutting.
11	Renovation work of small magnitude.
12	Maintenance of electrical assets at stations.
13	Attending with ART & ARME to the accident site.
14	Collection of material from other depot.

Outsourcing:

Advantages of Outsourcing Activities:

1	Monetary saving compared to present system.
2	Availability of physically fit person for the job.
3	No detention of trains due to absenteeism, absconding from duty, incapability of doing the job due to old age etc.
4	Administrative convenience.
5	Less / no union activities therefore better work culture.
6	Enforce conditions as per the requirement and benefits to Railways.
7	Saving of valuable manpower.

Guidelines of Railway Board for outsourcing as per letter no. 2002/PL/88/3 of dtd 28.01.2005.:

Activities	Scope
1. Unscheduled repair of major electrical assembly of locomotives/ Multiple Units/ Alternator/Fans/Compressor in under slung of AC coach/ Major Component of RMPU in AC Coaches. Unscheduled repair of major electrical assembly of locomotives/ Multiple Units/ Alternator/Fans/Compressor in under slung of AC coach/ Major Component of RMPU in AC Coaches.	Need based outsourcing

2. Unscheduled and Scheduled repairs of house wiring(power supply) and operations of Pumps/ DG Sets/Stationery AC Plants/Distribution network of Power supply.	Need based outsourcing limited to scheduled maintenance will be done.
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Scope of outsourcing :

1	Repairing of appliances & scheduled maintenance activities.
2	Outsourcing for water stagnation due to improper drainage facilities.
3	Workload diminished due to technical upgradation.
4	Hiring of vehicle
5	Out sourcing of Semi skilled/Un skilled staff for maintenance work.
6	Out sourcing of non core activities for maintenance of batteries, lights, fans and their cleaning in TL coaches at Train lighting maintenance depot.
7	Material purchasing
8	Material supply
9	Vehicle maintenance

Benchmarking of Electrical staff of Indian Railway is follows:

SN	Division	Benchmarking Men per '000 units
1	FZR of NR	0.03
2	JBP	0.19
3	IR	0.14

As per above, benchmarking of JBP division is less than IR average. So, more manpower exist in JBP division.

Critical Analysis:

There are so many activities have been out sourced in other railways. Modifications and up gradation of machinery and methods of working has implemented in the shed, time to time.

Outsourcing of various activities saves a lot of valuable man hours which results to save the manpower.

Railway Board permits outsourcing in noncore activity that is the Policy of Outsourcing, is concurrent to its effort of planned right sizing of organization.

There are so many activities shown in above para, has been out sourced. Modifications and up gradation of machinery and methods of working has been implemented in the shed, time to time. Outsourcing of various activities saves a lot of valuable man hours which results to save the manpower.

Workload is also minimized due to technical up gradation in this department. There are so many works that can be outsourced as like other railways.

As per above para, benchmark of JBP division is much higher than IR average. The current Benchmark is FZP division of NR. It needs to be diminished.

Vacancies of 30 posts are lying in various cadres since long period which may not be filled up due to technical up gradation and outsourcing in various sections.

Hence, vacancies of 30 posts should be surrendered immediately.

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.

Electrical Engineering is the field of the study of generation, transmission, distribution and use of electrical energy. Electrical Engineering in Railways made its beginning with the responsibility of illumination and ventilation at Railway stations, offices and residential complex and water supply. Thereafter, illumination of passenger carriages with a self generating mechanism added to the responsibility.

As stated, Electrical Engineering is a field of study of electric power generation, transmission, distribution and utilization with best engineering practices and energy efficiency.

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.

Keeping in view, all these constraints, Work Study Cell is assigned to conduct work study of '*Review of staff strength of Electrical General department of Jabalpur division*' with a view to assess the staff requirement as per the existing workload after technological upgradation and outsourcing. To arrive at the actual requirement of staff, the team held discussions with officers and supervisors of this division.

CHAPTER-I

INTRODUCTION_

- 1.1** Work Study on “Review of staff strength of Electrical General department of Jabalpur division” includes as a ‘Crash Study’ for the year 2018-19.
- 1.2** One of the main departments of the Indian Railways, Electrical department shoulders lot of responsibility in proper operation of railway services. With Railway Electrification on the rise, Electric traction hauls almost 60% of freight traffic and 48% of passenger traffic. It is the target of Indian railway that all trains will move with electric engine instead of diesel engine in future.
- 1.3** Electrical department is represented in the board by Member Electrical, ex officio Secretary to the Govt. of India. At zonal head quarters CEE (Chief Electrical Engineer) heads the department and in the division there are mostly four Sr. DEE's each of whom head the following areas:-
 - Traction Rolling Stock Operation
 - Traction Rolling Stock
 - Traction Distribution
 - General Services
- 1.4** Principal Chief Electrical Engineer is the technical & administrative head of the Electrical Department in West Central Railway. He looks after all the activities of planning, maintenance & operation of the all Electrical and Diesel assets with the assistance of other head of the department and officers posted in HQ, divisions and workshops.

He also acts as Electrical inspector of West Central Railway and his personal approval is obtained before energisation of any Electrical assets in West Central Railway.

1.5 The electric department functions in different wing, which are as follows:

1. Electric General Services
2. Traction Rolling Distribution (TRD)
3. Traction Rolling System (TRS)
4. Traction Rolling Operation (TRO)
5. Construction

1. Electric General Services – Supply of electricity to Service and residential buildings, train lighting, pump houses etc.

2. . Traction Rolling Distribution (TRD)- To supply electricity to wire for sub station from which distribute to line.

3. Traction Rolling System (TRS)- To maintain electric loco and electric loco sheds.

4. Traction Rolling Operation (TRO)- The main work of TRO is to control Drivers, Train Operation and loco movements.

5. Construction- construction work is different of electric department.

1.5 Role of Electrical Department:

Electrical department looks after planning , operation & maintenance of the all Electrical assets of West Central Railway, various assets include Electric Locomotives , Diesel Locomotives, Traction & distribution, General electrical services. Nominated maintenance schedules are given to all the electrical assets at various maintenance depots and workshop.

Electrical department is also co- ordinating with Railway Board, RDSO and various Production Units, regarding their requirement and following is various policies issued by them.

The Electrical department also maintains liaison with other department of West Central Railway for necessary co- ordination.

CHAPTER-II

Electrical Department

2.1 Sanctioned strength, men on roll and vacancy position of staff is as under:-

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2.3 Outsourcing:

2.3.1 Advantages of Outsourcing Activities:

1	Monetary saving compared to present system.
2	Availability of physically fit person for the job.
3	No detention of trains due to absenteeism, absconding from duty, incapability of doing the job due to old age etc.
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2.3 Scope of outsourcing :

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There are so many activities shown in above para 2.3, has been outsourced. Modifications and up gradation of machinery and methods of working has been implemented in the shed, time to time. Outsourcing of various activities saves a lot of valuable man hours which results to save the manpower.

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As per above para 2.5, benchmark of JBP division is much higher than IR average. The current Benchmark is FZP division of NR. It needs to be diminished.

Vacancies of 30 posts are lying in various cadres since long period which may not be filled up due to technical up gradation and outsourcing in various sections.

Hence, vacancies of 30 posts should be surrendered immediately.

2.7 Recommendation:

There are so many categories are redundant for activities. So, 30 vacant posts of different categories are proposed for surrender immediately which are lying vacant from a long period.

CHAPTER-III

3

FINANCIAL IMPLICATION

- 3.1** Financial implication for the surrender of 30 posts of various cadre of Electrical General (G) will be as under-

Particular	Amount
Mean of grade	37,450
Transportation	1800
Salary Per Month	39,250
X 12 = Per annum	4,71,000
X No. of posts (30)	1,41,30,000
Say	1.41 Crore

On surrender of above 30 surplus posts, the anticipated saving works out to **Rs 1.41 Crore per annum.**
