



**WORK STUDY TO REVIEW THE  
OPERATING STAFF STRENGTH OF CABIN MAN,  
TROLLEY MAN & MOTOR TROLLEY DRIVER  
OVERTVC DIVISION  
G.275/WSSR – 301920/2019–20**

**SOUTHERN RAILWAY****PLANNING BRANCH****G.275/WSSR-301920/2019-20****WORK STUDY TO REVIEW THE  
OPERATING STAFF STRENGTH OF CABIN MAN,  
TROLLEY MAN & MOTOR TROLLEY DRIVER OVER  
TVC DIVISION****STUDIED BY****WORK STUDY TEAM  
OF  
PLANNING BRANCH****MAY2020**

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(i)

**ACKNOWLEDGEMENT**

The work study team acknowledges the co-ordination extended by AOM/Coaching/TVC, TI/HQRS/TVC& and other SSs of this sections in conducting the study

(ii)

**AUTHORITY**

Annual Programme of work studies approved by SDGMfor the year 2019-20

(iii)

**TERMS OF REFERENCE**

Work study to review the Operating staff strength of Cabin man, Trolley man & Motor trolley driver over TVC Division

(iv)

**METHODOLOGY**

The work study team has applied the following methodologies in conducting the work study.

- (1) Collection of Data from TVC division
- (2) Observation of working procedure and deployment of staff
- (3) Discussion with Traffic Inspectors and Station Superintend over TVC Division



**SUMMARY OF RECOMMENDATIONS****Recommendation No.1**

9 vacant posts of Cabin man in GP Rs.2400/- over TVC division is found excess to the requirement.

**(9 Posts)****Recommendation No.2**

4 vacant posts (3 posts of Assistant Trolley man in GP Rs. 1800/- & 1 posts of Motor trolley driver in GP Rs. 2400/- over TVC division) is found excess to the requirement.

**(4 Posts)****Total – 13 posts**

**CHAPTER – I****1.0 INTRODUCTION**

- Indian Railway a part and parcel of every Indian's life, which cannot imagine the India without Railways, because this system is the backbone of Indian economy and one of the pillars of our nation.
- The Hon'ble Prime Minister of India described as Railways perhaps along with the Post Offices are the only two institutions in India with deep network which if tapped judiciously can create substantial improvement in the inter-land.  
Railways was always considered only as a transport in our country, we want to see Railways is the backbone of India's Economy development.
- The first Indian train started its run on track on April 16<sup>th</sup> 1853, a Saturday evening 03.35 pm between Boribunder and Thane a distance of 34 Km.
- The second train of the India connected between Howrah and Hoogli on 15<sup>th</sup> August 1854.
- The third train service made between Vyasarpadi and Walajah Road opened on 1<sup>st</sup> July 1856

**1.1 THIRUVANANTHAPURAM DIVISION**

Thiruvananthapuram Division is one among the six divisions in Southern Railway its a capital city of Kerala and it is fifth largest division in southern railway and manages 625 km route track and 108 railway stations in the states of Kerala and Tamil nadu. The major stations of this division are Thiruvananthapuram, Ernakulam, Kollam, Thirussur, Kochuveli, Alappuzha, Varkala, Karunagappalli, Kayamkulam, Mavelikkara, Aluva, Chengannur, Angamali, Nagercoil, Kottayam, Kanniyakumari.

**1.2 OPERATING BRANCH**

- Among all branches in Indian Railways, the Operating Branch is very important since the train movements in punctual with safety and coverage all activities to achieve the task are the vital duty for Operating Branch.
- It is one of the interface departments between Public and Railways apart from Commercial branch.
- Operating and Commercial branches are coming under Traffic Department and headed by Member Traffic at Railway Board level.
- The co-operation required for Railways from State Government /Quasi Government also executed by the Operating Staff.
- Achieving efficiency is the prime motto of any organization on the same determination. Indian Railways also takes all necessary actions to achieve the efficiency. To achieve the target, IR utilizes the man power at an optimum level, as it pays 33% of its total revenues to their staff wages.
- This Work study is confined to review the Operating staff strength of Cabin man, Trolley man & Motor trolley driver over TVC Division.

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## CHAPTER – II

### 2.0 PRESENT SCENARIO

- 2.1 Operating Department in Railways is responsible for running of trains, crew booking, and managing of Station premises.
- 2.2 The main objective of Operating Department is to operate smooth and safe running of trains. This is done through arrangement of signals, points and other appliances operated from a panel or lever frame, so inter-connected by Mechanical or Electrical locking or both, this operation must take place in proper sequence to ensure safety and the same is known as Interlocking operation from Cabins situated at both ends of stations and various locations of points.
- 2.3 In Interlocking, points, signals and other units are usually operated by means of levers and panels. Interlocking between these levers is accomplished either by mechanical or by electrical or electro-mechanical or electronic means. In the former method, some mechanical contrivance variously designed, controls the relation between one lever and the other. At less important stations, the point, signal and other levers are interlocked by means of keys which are used to lock or release the levers, either in the normal or in the reverse position, as required. At other stations, the levers are interlocked by means of tappets inside a box of the lever frame, which is normally kept covered and sealed.
- 2.4 With the advancement of technology, the system of Interlocking has changed drastically. Earlier Mechanical Interlocking was invoked in the system, but with time, phase-wise, Railway has adopted Panel Interlocking (PI) and Route Relay Interlocking (RRI) in large scale. With the introduction of new Interlocking systems of PI & RRI and EI (Electronic Interlocking), the involvement of manpower has reduced considerably and the operation of interlocking became smooth, safe and fast.
- 2.5 Types of Interlocking in Indian Railways
  - i) Mechanical Interlocking: The era of interlocking started with mechanical frames. In Mechanical the signaling functions are operated by levers. To ensure the signal can be taken 'OFF' only after the point is correctly set, we can arrange the interlocking between the signal lever and point lever to be such that the signal lever can be reversed only after the point lever is in the correct position, viz. 'Normal' or 'Reverse', as the case may be. As the size of yards & train movements increased, size of lever frames also increased. These lever frames not only increased in size, occupying more space and also required intensive maintenance.
  - ii) Electrical Interlocking: Electrical equipment of some items may be used even in the mechanical interlocking systems described above (e.g., electrical relays that operate slotting). However, the basic operation remains mechanical in nature. In electrical interlocking, the fundamental mechanisms use electric control extensively. Electrical interlocking often goes hand in hand with power signaling.

- iii) Panel Interlocking: With the advent of Electro-mechanical relays, lever frames gave way to relay interlocking based installations. This development resulted in relatively faster and safe operation and reduced size of buildings required for housing of interlocking installations. With further increase in traffic and expansion of railway network, panel Interlocking installations were commissioned.
- iv) Route Relay Interlocking: Route Relay interlocking is same as Panel Interlocking with Electro Mechanical Relays doing the Interlocking except that it can be employed for big yards. The interlocking is done between one route and another route. Another Important feature in terms of operating point of view is that SM only has to press two buttons i.e. Signal button & Route Button (entry&exit system).
- v) Solid State Interlocking (SSI): Computer based interlocking uses thousands of Electro-mechanical relays requiring complex wiring and Inter-connections. The wiring diagrams for such installations run into hundreds of sheets. Individual relays, wiring and interconnections along with thousands of shouldered joints are required to be physically examined and certified. This exercise requires traffic blocks of long durations and large manpower to manage the traffic during blocks.

2.6 Over TVC Division 7 sections under TI control with their headquarters at TCR, ERS, KTYM, ALLP, QLN, TVC & NCJ covers a total distance of 625 km of route track.

2.7 The Sanction, Actual, Vacancy details of operating staffs of Cabin man, Trolley man & Motor trolley driver over TVC division

Cabin Man			Assistant Trolley man			Motor Trolley Driver			Total		
San	Act	Vac	San	Act	Vac	San	Act	Vac	San	Act	Vac
9	-	9	3	-	3	1	-	1	13	-	13

2.8 Duties of Cabin Man

- 1) Cleaning and maintaining operational equipments provided at cabins.
- 2) Operation of levers for setting of points, locks and opening/closing of barrier operated gates.
- 3) Recording of messages/private numbers with entry in cabin log register for arrival/departure timings of trains.
- 4) Exchanging private number through telephone with gateman/station master for movement of trains.
- 5) Exchanging all right signals and ensuring complete arrival of trains.
- 6) Maintaining the charge diary for taking over/handing over of daily charge.
- 7) Other misc. works and obeying duties assigned by their senior officials.



## 2.9 List of duties of Trolley men

Although there is no comprehensive duty list of trolley men, during the discussion with officials the following duties of Trolley man is hereunder

- 1) Inspection of track (i.e. Point and Crossings, Curve, LWR, Bridge, Drain & Civil Work)
- 2) Lookout man duty during inspection.
- 3) Accompanying foot inspection section TI & Other officials.
- 4) Carrying out inspection tool & kit of various parameters as per laid down schedule, along with all officers.
- 5) Helping in measurement of various parameters of track gauge cum level. Up keeping of inspection tools and Equipment for Trolley/ Motor Trolley

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

3.1. The upgradation in assets/working systems are introduced to achieve better utilization of available resources. In the panel interlocking system, lesser human involvement is required than mechanical/rudimentary interlocking. In the mechanical/rudimentary interlocking system, the operation for train involves working of rods, wires, levers, gears, bolts, keys etc. which are operated by the cabinmans from the end cabins, whereas in the panel interlocking the working of stations for trains has become centralized and carried out through electrical devices by pressing various knobs provided on illuminated diagram board. After installation of panel interlocking, all these operations are carried out by station master on duty and there is no requirement of cabinman staff for end cabins/central cabins. The panel interlocking is more economical, safer and faster in comparison to mechanical interlocking which has also abolished the deployment of cabinman staff.

**3.2. Requirement of Cabin man staffs and Recommendations**

During the course of study, the work study team noticed all block stations over TVC division are equipped with panel interlocking but still the operating department is having the 9 sanction posts of redundant category of Cabinman. As a result of modernization after commissioning of Panel & Route Relay Interlocking system, the cabins have become inoperative and the cabin man post is redundant. Hence the sanctioned post of 9 cabin manis surplus to the requirement.

**3.3 Requirement of Trolley man& Motor trolley driver staffs and Recommendations**

Trolleyman are entrusted with two major activities viz., working of trolley and assisting the PWI in engineering department. Operating department of TVC division coordinates with engineering officials for trolley movement inspection as stated by the Coordinating officer. Since the posts of trolley man & motor trolley driver are inoperative in operating department, hence the sanctioned posts of 3 Assistant Trolley man and 1 Motor trolley driver are surplus to the requirement.

**Recommendation No.1**

9vacant posts of Cabin man in GP Rs.2400/- over TVC division is found excess to the requirement.

**(9 Posts)****Recommendation No.2**

4vacant posts (3 posts of Assistant Trolley man in GP Rs. 1800/- & 1 posts of Motor trolley driver in GP Rs. 2400/- over TVC division) is found excess to the requirement.

**(4 Posts)**

3.28 Sanction Vs Requirement (Category wise)

Sl. No.	Category	San	Act	Req.	Surplus
1	Cabin man	9	-	-	9
2	Asst. Trolley Man	3	-	-	3
3	Motor trolley driver	1	-	-	1
Total		13	-	-	13



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

The draft work study report for this study was handed over to AOM/Coaching/TVC(Co-ordinating Officer) on 18/02/2020 through dispatch to offer his remarks. A reminder letter was also sent on 12/03/20 for remarks on or before 20/03/20. Normally a period of 15 days is allowed to offer Co – ordinating officer remarks. In this case even after 83 days the remarks have not been received. Hence the work study report is released without the remarks of Co – ordinating officer.

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CHAPTER -V5.0 FINANCIAL SAVINGS

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

Sl.No.	Category	Grade Pay (Rs)	No. of Posts	Money value (Rs)	Annual Financial savings (Rs)
1	Cabin man	2400	9	59696	6447168
2	Asst. Trolley man	1800	3	41944	1509984
3	Motor trolley driver	2400	1	59696	716352
Total			13		8673504



ANNEXURE

The Sanction, Actual, Vacancy details of operating staffs of Cabin man, Trolley man & Motor trolley driver over TVC division

Cabin Man			Assistant Trolley man			Motor Trolley Driver			Total		
San	Act	Vac	San	Act	Vac	San	Act	Vac	San	Act	Vac
9	-	9	3	-	3	1	-	1	13	-	13





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