WORK STUDY REPORT

ON

REVIEW OF CABIN MASTER/CABIN SIGNAL MAN

STAFF WORKING

IN OPERATING DEPARTMENT DUE TO

INTRODUCTION OF PANEL INTERLOCKING
OVER
MORADABAD DIVISION
2019-20

WORK STUDY TEAM

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DATE OF COMMENCEMENT: 21/01/2020
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No. 16-CP/39/WS/19-20

Central Planning Cell
Northern Railway,
Headquarters Office,
Baroda House, New Delhi.

EXECUTIVE SUMMARY

This study was allotted to Central Planning Cell, HQ Office with a view to identify redundant/unproductive/obsolete activities due to introduction of technological up-gradation in the working of signaling system and to suggest ways and means to improve manpower productivity over Moradabad Division.

STAFF POSITION

The total sanctioned and on roll strength of Cabin master/cabin signal man staff working at stations which have been covered in the review over MB Division is as under:-

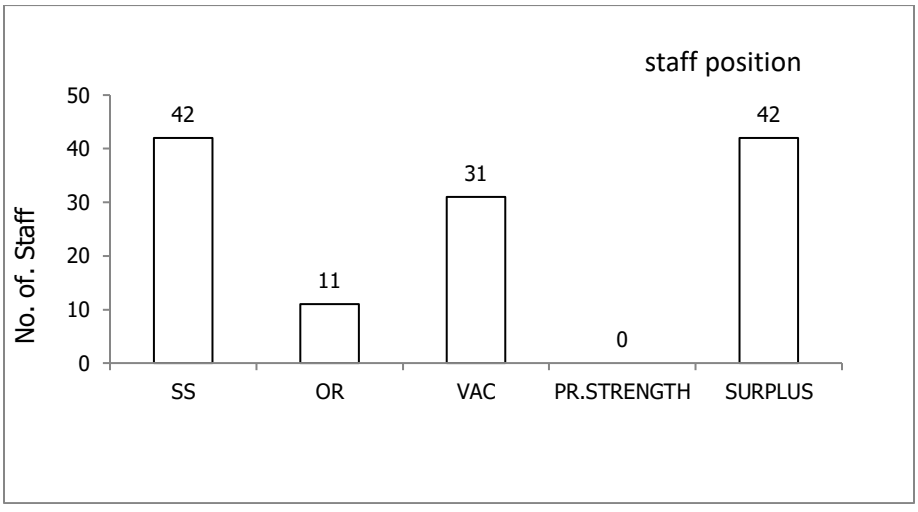
S.No.	Category	S/S	O/R	Variation
1	Cabin Master/Cabin Signal Man	42	11	31
	Total	42	11	31

No. posts identified as surplus and recommended for surrender: -

Gr. 'C' = 42 posts
Gr. 'D' = NIL posts
Total = 42 posts

FINANCIAL IMPLICATIONS

Anticipated recurring savings = ₹ 294.50 lacs per annum.
Capital saving = Nil
Total saving = ₹ 294.50 lacs per annum.



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SYNOPSIS

Indian Railway is one of the largest and busiest rail network in the world and an important mode of public transportation in the country. Today, Indian Railway ranks among the top five National railway systems in terms of size and scale and is poised to emerge a world class railway system. Indian Railway has been performing a valuable social role in passenger and freight sector by providing affordable means of relatively safe and efficient transportation for millions of passenger daily.

Indian Railway has successfully adopted to the changing needs of travel and transport and observed the advancement in railway technology to meet with the requirement of moving large volume of passengers and freight traffic. The efficient, safe, fast and reliable operation needs multiple aspect colour light signaling, panel interlocking, SSI, Automatic block signaling system, block proving by axle counter etc. Great emphasize has been laid for enhancing safety of signaling system through provision of track circuiting at stations. The panel interlocking is one of the prime safety measures, which enables safe, secure and reliable train operation at stations. Most of the stations have been equipped with panel interlocking over MB Division by replacing the obsolete mechanical interlocking system.

Keeping in view of above, SDGM/NR has allotted this work study to Central Planning Cell, HQ Office, to review Cabin master/cabin signal man staff due to introduction of Panel interlocking over MB Division to eliminate wasteful expenditure as a result of modernization after installation of PI/RRI at various stations e.g. KGF,DLP,DAM, MPH and MIL stations.

In this review 42 posts of Cabin master/cabin signal man staff have been identified as surplus. After implementation of all the recommendations made in the report in toto, the railway administration will achieve a net recurring annual saving to the tune of ₹ 294.50 lacs per annum.

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SUMMARY OF RECOMMENDATIONS

Rec.No	Recommendations	Refer para No.	Accepting/ implementing authority
1	It is proposed that 42 posts of Cabin master/cabin signal man staff are identified as surplus from KGF,DLP,DAM, MPH and MIL stations due to introduction of panel interlocking and to be surrendered. Cabin master/ Cabin signal man Gr. ₹ 5200-20200-2400=30 posts Cabin signal man Gr. ₹ 5200-20200-1900=12 posts Total = 42 posts	2.5.4(B)	ADRM/MB Sr.DOM/MB Sr.DPO/MB

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ACKNOWLEDGEMENT

The work study team is highly grateful to Shri Man Singh Meena, ADRM/MB, Sh. Naveen Kumar, Sr.DOM/MB and Sh. Vipul Goel, Sr.DPO/MB and other functionaries for giving their valuable guidance and extending full cooperation in providing requisite data/information during the conduct of study.

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1.0.0 INTRODUCTION

1.1.0 The main objectives of the operating department in the Indian Railways is to ensure maximum utilization of line capacity as well as maximum through put with the available resources/assets. All these objectives can be achieved by upgrading the technology in signal and telecommunication, standard of interlocking, strengthening of track and bridges, modernization of rolling stock, replacement of overaged assets etc. To get these objectives, right sizing of staff strength, increasing the manpower productivity and economy in expenditure to be explored.

1.2.0 Keeping in view of above, SDGM/NR has assigned a work study to review staff strength of Cabin master/cabin signal man staff due to introduction of panel interlocking over MB Division to Central Planning Cell, HQ Office with a view to eliminate wasteful expenditure and to ensure optimum utilization of manpower and assets

1.3.0 TERMS OF REFERENCE:

The following terms of reference have been adopted to conduct the study:-

(i) To review staff strength vis-à-vis existing workload.

(ii) To identify redundant/unproductive activities with a view to eliminate wasteful expenditure.

(iii) To suggest ways and means to improve the efficiency and productivity of the system.

1.4.0 METHODOLOGY ADOPTED

The following work study techniques were adopted to conduct the study:-

(i) Data collection and its critical analysis

(ii) Sample check, personal spot observations, activity sampling, analytical estimation and application of yardstick in vogue, if any.

(iii) Held discussions at various levels.

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2.0.0 BRIEF DESCRIPTION, CRITICAL ANALYSIS, REQUIREMENT OF STAFF AND OBSERVATIONS.

2.1.0 This study is confined to certain stations over Moradabad Division, which has been equipped with Panel Interlocking(PI) system. The Cabin man were posted at the end cabins/central cabins for setting of routes and lowering of signals for reception/dispatch of trains. With the introduction of panel interlocking at various stations e.g. KGF,DLP,DAM, MPH and MIL stations of Moradabad division, train operation has become centralized and pulling/pushing of levers for setting of routes/signals from end cabins/central cabins have been totally eliminated.

2.2.0 The installation of Panel Interlocking system has eased the operational working of stations masters. These panels are provided at a centralized place of the station building. It consists of various types of push buttons for operation of motor points and colour light signals. The route and track circuits are exhibited by LEDs. After the introduction of panel interlocking the operation work is carried out by station master on duty. Prior to this the same operation was done by Cabin man from the end cabins/central cabins on the guidance of on duty station master.

2.3.0 The power cabins are commissioned at major junction stations whereas road side stations have been equipped with axle counter block system/SGE type block instrument for granting/obtaining line clear for reception/dispatch of trains.

2.4.0 ACTIVITIES/WORK DONE BY CABIN MASTER/CABIN SIGNAL MAN

1) Cleaning and maintaining the 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 subordinates from time to time.

2.5.0 CRITICAL ANALYSIS

2.5.1 The up gradation 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 Cabin master/cabin signal man staff 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/mimic board. After installation of panel interlocking, all these operations are carried out by station master on duty and there is no requirement of Cabin master/cabin signal man staff for end cabins/central cabins. The manual operation of setting of routes activities and signaling operation has been eliminated which leads to safe operation of trains. The panel interlocking is more economical, safer and faster in comparison to mechanical interlocking which has also abolished the deployment of Cabin master/cabin signal man staff.

2.5.2 The provision of panel interlocking has increased the line capacity and through put of the Section. In train operation safety has great importance which we derive from panel interlocking/route relay interlocking system. Hence, considering the aforesaid facts involves in the working of operating staff (cabin master/cabin signal man) over MB Division.

2.5.3 The review has been conducted to eliminate wasteful expenditure which is imperative due to redundant/obsolete activities as a result of modernization after commissioning of panel interlocking.

2.5.4 STAFF POSITION

During conduct of study, the team has considered the staff position of following stations over MB Division, where panel interlocking has been incorporated and operation has been started. The staff position has been collected from Divisional HQ Office which is tabulated as under:-

stations

S.N	Station	Category	S/Strength	On roll strength	Vacancy
1	KGF	Cabin master/cabin signal man	09	02	07
2	DLP		08	02	06
3	MPH		08	03	05
4	DAM		09	02	07
5	MIL		08	02	06
Total			42	11	31

The above table reveals that at the above mentioned stations, the total sanctioned strength of Cabin master/cabin signal man is 42 with on roll strength 11 and 31 vacant posts.

2.5.5 REQUIREMENT OF STAFF AND RECOMMENDATIONS

During the course of study, the team collected the staff position and working procedure of said stations where panel interlocking has come into operation. These stations are equipped with panel interlocking. Thus, after commissioning of panel interlocking system the cabins have become in operative and redundant.

It is obvious that Cabin master/cabin signal man staff working prior to commissioning of panel interlocking system have become surplus and is recommended to surrender them.

The above table reveals that the total sanctioned strength of Cabin man at the said stations is 82 and there is no requirement of this staff as stations have been equipped with PI/RRI. Hence, 82 posts of Cabin man are identified as surplus and recommended for surrender.

2.5.6 SUMMARY OF EXISING AND PROPOSED STAFF

S.N	Station	Category	S/Strength	Proposed strength	Identified surplus
1	KGF	Cabin master/cabin signal man	09	-	09
2	DLP		08	-	08
3	MPH		08	-	08
4	DAM		09	-	09
5	MIL		08	-	08
Total			42	-	42

The above table reveals that the total sanctioned strength of Cabin master and cabin signal man staff at the above said stations is 42 and there is no requirement of this staff as stations have been equipped with PI/RRI. Hence, 42 posts of Cabin master/cabin signal man staff are identified as surplus and recommended for surrender

RECOMMENDATION NO.1

It is proposed that 42 posts of Cabin master/cabin signal man staff are identified as surplus from KGF,DLP,DAM, MPH and MIL stations due to introduction of panel interlocking be surrendered.

Cabin master/Cabin signal man Gr. ₹ 5200-20200-2400=30 posts

Cabin signal man Gr. ₹ 5200-20200-1900=12 posts

Total = 42 posts

3.0. FINANCIAL IMPLICATIONS

3.1. Sanctioned strength: The total annual expenditure on Cabin master and cabin signal man staff working at various stations which have been covered in this review of the MB Division is as under:-

S N	Category	Pay Scale + Grade Pay	Monthly value per posts	S/ strength	Monthly expenditure	Total annual expenditure
1	Cabin master/ cabin signal man	5200-20200-2400	62361	30	1870830	22449960.00
2	Cabin signal man	5200-20200-1900	48614	12	583368	7000416.00
Total				42		29450376.00

The above table reveals that total annual expenditure being incurred on 42 sanctioned posts of Cabin master and cabin signal man working at various stations comes to ₹ 29450376.00

3.2 Proposed strength: As the above said stations covered in the work study report have been equipped with RR/Panel Interlocking, there will be no requirement of the cabin staff. So cabin staff is not being proposed at these stations.

SN	Category	Pay Scale + Grade Pay	Monthly value per posts	Proposed staff	Monthly expenditure	Total annual expenditure
1	Cabin master/ cabin signal man	5200-20200-2400	62361	-	-	-
2	Cabin signal man	5200-20200-1900	48614	-	-	-

The above table reveals that total annual expenditure on Cabin master/cabin signal man staff at these above said stations will be reduced to zero instead of ₹29450376.00 and net annual saving will be ₹ 29450376.00

3.3 Anticipated Recurring savings:

SN	Category	Grade ₹	No. of surplus posts	Monthly value per posts Rs.	Anticipated annual recurring saving Rs.
1	Cabin master/cabin signal man	5200-20200-2400	30	1870830	22449960.00
2	Cabin signal man	5200-20200-1900	12	583368	7000416.00
Total			42		29450376.00

No. of posts identified as surplus: -

Group 'C'= 42 posts
Group 'D'= NIL posts
Total = 42 posts

Anticipated recurring saving = ₹294.50 lacs per annum
Capital saving = Nil
Total saving = ₹437.47 lacs per annum

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WORK STUDY REPORT DETAILED CHART

Department : - Operating

Name of study : - Review of Cabin man due to introduction of Panel interlocking at various stations of MB Division.

Activity centre: - MB Division.

S.N.	Sub activity	Brief description of workload	Actual staff deployed	Work Study recommend-ations	Representative workload
1	Operational duty performed by Cabin master/cabin signal man staff to set route and lowering of signals from end cabins/ central cabins before introduction of PI.	Most of the stations over MB Division have been equipped with PI. Therefore mechanical/ rudimentary interlocking has been replaced.	SS= 42 OR= 11 Vac=31	The work study team identified 42 posts of Cabin master/cabin signal man as surplus and recommended for surrender.	After commissioning of RRI/PI at various stations the mechanical activities have been eliminated.

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LIST OF ANNEXURES

S.N.	Description	Annex. No.
1	Statement showing staff position of Cabin mater/cabin signal man staff at various stations which have been equipped with PI/RRI of MB Division.	I
2	Letter of C.P. cell to initiate the work study No. 16-CP/39/WS/19-20 dated 06/01/2019	II

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Annexure No.I

STAFF POSITION OF CABIN MASTER/CABIN MAN STAFF AT VARIOUS STATIONS OF MB DIVISION WHICH HAVE BEEN EQUIPPED WITH PI/RRI AND COVERED IN THIS REVIEW.

S. N	Station	Category	S/Strength	On roll strength	Vacancy
1	KGF	Cabin master/cabin signal man	09	02	07
2	DLP		08	02	06
3	MPH		08	03	05
4	DAM		09	02	07
5	MIL		08	02	06
Total			42	11	31