



WORK STUDY
ON
REVIEW OF STRENGTH OF STAFF
UNDER SSE/W/TSK IN TINSUKIA DIVISION
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STUDY NO. WSNF/16/2019- 20.

CASE NO. Z/375/10/16/2019- 20.

CENTRAL PLANNING ORGANISATION
N. F. RAILWAY/MALIGAON
GUWAHATI - 781011.

EXECUTIVE SUMMARY

SUBJECT: Work study on “Review of strength of SSE/W/TSK under Sr.DEN/C /TSK in Tinsukia Division.”

STUDY NO : WSNF/16/2019- 20
CASE NO : Z/375/10/16/2019- 20
AUTHORITY : SDGM/N.F.R.
CONCERN DIV. : TINSUKIA
DEPARTMENT : ENGINEERING
DATE OF COMMENCEMENT : 29.04.2019
DATE OF COMPLETION : 07.05.2019
DATE OF SUBMISSION : 07.05.2019

TERMS OF REFERENCE:

Approved annual Programme of Work Study.

NOS. OF RECOMMENDATION: 1(One)

The study team has identified 14 nos of vacant posts of different categories (Sr Tech Carpenter = 2, Tech Carpenter Gr I = 4, Tech Painter Gr-I - 1, Tech S/Mason Gr-II – 1, Tech/Fitter Gr-I -1, Tech/Fitter Gr-III – 1, SrTechFPO -1, TechTWM Gr-I -1 &Khalasi Helper -2) as surplus and proposed for surrender, which may be deleted from the working BOS.

PROJECTED MAN POWER : 14 Posts.

PROJECTED FINANCIAL SAVING : Rs 96 Lakhs per annum.

MONTH AND YEAR OF CIRCULATION : May/2019

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CHAPTER – I

1.0. INTRODUCTION:

The Railway administration has to make the best use of its resources including manpower keeping them at the optimum level to attain the financial viability, taking into consideration to this objectives, The Railway Board has emphasized to take up review of staff strength of various departments in the Railway. In pursuance of this policy of Railway Board, the central planning Organisation of N.F.Railway/ Maligaon has conducted this work study on “Review of staff strength in the unit of SSE/W/TSK under Sr.DEN/C /TSK in Tinsukia Division.”

2.0.ACKNOWLEDEMENT :

Work study team is grateful to Shri P. Kumar, Sr.DEN/C/TSK for his kind guidance and co-operation for conducting this study. The work study team is also thankful to Shri A. Hazarika, ADEN/G/TSK and Shri A. Chakraborty, Ch.OS/Sr.DEN Office/TSK for his assistance rendered to the Work Study team for conducting the work study.

3.0.RATIONALE FOR CONDUCTING THIS STUDY

- Man power is the most costly and precious resource over Indian Railway and Right sizing is the need of the hour.
- Focusing attention on core activities by reducing / elimination of non-core activities.
- Improving the efficiency (out put / input) either by improving the output (numerator) or by decreasing the input (denominator).
- Upgradation / introduction of automation / Innovations.
- Outsourcing of non core activity.
- Availability of better process/ technology.
- Reducing/ removing redundancy in work.

4.0.TERMS OF REFERENCE :

Approved annual work study programme.

5.0.METHODOLOGY:

a) Discussion with Sr.DEN/C/TSK & the nominated Sr.Subordinate

During field work, discussion was done with regarding the work study and Shri P.Kumar, Sr.DEN/TSK had nominated Shri A.Hazarika, ADEN/G/TSK and Shri A. Chakraborty, Ch.OS/TSK for the study team, which is placed as Annex-I .

b) Collection of data relating to workload

The required data is collected from Sr.DPO/TSK at DBRT Office, Sr.DEN/TSK Office to conduct the study.

CHAPTER-II

Activities of staff

- **Work load of Tech.Carpenter:**

This category is engaged for Carpentry work as well as repairing of doors, windows and other wooden structures of buildings of Railway and Railway colonies. Presently these works are accomplished by engaging the contractor/agency.

- **Work load of Black Smith:**

This category is employed to repair, fittings of Iron door, windows, grills other metal related work in railway premises. They also entrusted to fix the rolling sheet, cutting metal pipes and ancillary works in Enggdeptt.

- **Work load of Mason:**

This category is engaged for masonry work of Drains, Boundary walls & all sorts of plastering/repairing works of Railway buildings and premises. Mostly these works are accomplished by the contractor/agency engaged.

- **Work load of S/Mason:**

This category is engaged for masonry work of safety tanks, repairing the safety tanks, sewage lines of Railway buildings and premises. Presently these works are accomplished by the contractor/agency engaged.

- **Work load of FPO:**

This category Known as Filter Plant Operator are employed for operating Filter Plants of Pump House for each station building for water supply which are presently accomplished by engaging the contractor/agency. Only a skeleton staff of FPO are required to look after the contractors work and physical attendance/ work required in case of emergency.

- **Work load of Fitter :**

This category is employed to look after the plumbing , water pipeline repairing jointing work etc. of Railway premises and colonies and maintain the water line network trouble free in day to day working. Presently these works are accomplished by engaging the contractor/agency and these fitter categories are employed to keep vigil and monitor the same as and when it is required.

- **Work load of Sr. Watchman:**

Work load of watchman is to keep the assets in safe custody. Regular checking of physical condition of go-downs and sealing properly. If noticed any damage or suspicious intruders in the campus , should report to the unit in-charge immediately.

- **Work load of TWM:**

TWM is entrusted with fitting and repairing of Tube Well in the jurisdiction of SSE(Works).

- **Work load of FPO/Helper:**

This category is employed to assist the FPO in filter plant of pump house for replacing charcoal, sand etc. used in Filter plant and maintaining the plant.

JURISDICTION UNDER SSE/W/TSK

The jurisdiction of SSE/W/TSK is from Tinsukia to Dangri in Main line and Tinsukia to Ledo in branch line (Dangri - Tinsukia - Ledo)

WORK LOAD OF THE UNIT OF SSE/W/TSK

RESIDENTIAL QUARTER

TYPES OF QUARTER	TOTAL NO OF QUARTER
Type -I	299
Type -I (Spl)	143
Type - II	471
Type -III	35
Type -IV	11
Type -V	0
Total	959

Total Plinth area of residential building/Qtrs = 4767.88 sq m

Total plinth Area of Service Building/ Office Building = 45558.82Sqmt

OTHER WORKS LOAD.

- 1) Road = 59462.00 Rm. X 2.5 mt = 148655 sqmt
- 2) Drains Major = 689.35Rm and Minor = 198.60 Rm.= 887.95 Rm(Total) x0.3mt=266.385 sqmt (Average)
- 3) Bridge Major = 689.35 Rm and Minor = 241.58 Rm . = 930.93 Rm(Total) x 2.5 mt = 2327.325 sqmt
- 4) Level Crossing = Manned =56 Nos Unmanned = Nil
- 5) Pipeline 52671.00 Rm

FILTER PLANT

STATION	NUMBER	TYPE OF FILTER	CAPACITY
TSK	3	Deep Tubewell with IRP	1,50,000 gallon.
MJN	1	Deep Tubewell with IRP	10,000 gallon
TH	1	Deep Tubewell	10,000 gallon
BGPI	2	Hand pump	Nil
DBY	1	Deep Tubewell	30,000 gallon.
PWA	2	Hand pump	Nil
MRG	1	Deep Tubewell	20,000 gallon
BGLI	2	Hand pump	Nil
LLO	1	Deep Tubewell with IRP	Nil
LONGSOWAL	1	Hand pump	Nil
BPJ	1	Hand pump	Nil
HNR	1	Hand pump	Nil
DUT	3	Hand pump	Nil
RPY	2		Nil
TLL	2		Nil
DNGI	0		Nil

DETAILS OF WORK LOAD FOR THE PERIOD FROM APRIL'16 TO MARCH'17.

Nature of Works	Number of Compliant	
	Received	Complied
Leak proof	104	82
Door changed	175	120
Masonry	208	130
Carpentry	120	75

Water Supply

Station	Tap Water	Raw Water	No of Tube well	No of Deep Tube well
TSK	192000 gallon	48000 gallon	12	5
MJN	60000 gallon	Nil	6	1
THI	10000 gallon	Nil	2	1
BGPI	Nil	Nil	1	Nil
DBY	10000 gallon	Nil	2	1
PWA	Nil	Nil	2	Nil
MRG	20000 gallon	Nil	2	1
BGLI	Nil	Nil	2	Nil
LLO	42000 gallon	Nil	1	1
LONGSOWAL	Nil	Nil	1	Nil
BPJ	Nil	Nil	Nil	Nil
HNR	Nil	Nil	Nil	Nil
DUT	Nil	Nil	2	Nil
RPY	Nil	Nil	2	Nil
TLL	Nil	Nil	2	Nil
DNGI	Nil	Nil	0	Nil

2.3. STAFF POSITION OF SSE/W/TSK OF TINSUKIA DIVISION

SN	CATEGORY	SCALE	G/PAY	BOS	ON ROLL	VACANCY
1	Sr Tech Carpenter (MCM)	9300-34800	4200	02	00	02
2	Tech Carpenter Gr-I	5200-20200	2800	04	00	04
3	Tech Carpenter Gr-II	5200-20200	2400	01	00	01
4	Tech Carpenter Gr-III	5200-20200	1900	01	02	-01
5	Sr Tech Painter	9300-34800	4200	01	01	00
6	Tech PainterGr- I	5200-20200	2800	02	01	01
7	Tech Painter Gr-II	5200-20200	2400	01	01	00
8	Tech Painter Gr-III	5200-20200	1900	01	01	00
9	Tech Black Smith Gr-I	5200-20200	2800	00	00	00
10	Tech Black Smith Gr-II	5200-20200	2400	00	00	00
11	Tech Black Smith Gr-III	5200-20200	1900	00	00	00
12	Sr Tech Mason (MCM)	9300-34800	4200	01	00	01
13	Tech Mason Gr-I	5200-20200	2800	02	02	00
14	Tech Mason Gr-II	5200-20200	2400	00	00	00
15	Tech Mason Gr-III	5200-20200	1900	00	00	00
16	Tech S/Mason Gr-I	5200-20200	2800	01	02	-01
17	Tech S/Mason Gr-II	5200-20200	2400	01	00	01
18	Sr Tech/Fitter	9300-34800	4200	01	00	01
19	Tech/Fitter Gr-I	5200-20200	2800	02	01	01
20	Tech/Fitter Gr-II	5200-20200	2400	00	01	-01
21	Tech/Fitter Gr-III	5200-20200	1900	01	00	01
22	SrTechFPO	9300-34800	4200	01	00	01
23	TechFPO Gr-I	5200-20200	2800	01	01	00
24	TechFPO Gr-II	5200-20200	2400	01	01	00
25	TechTWM Gr-I	5200-20200	2800	01	00	01
26	Khalashi,Khalasi Helper, V/M,F/M	5200-20200	1800	03	01	02
27	SWM	5200-20200	1800	02	02	00
		TOTAL-		31	17	14

CHAPTER-III

3.0 . CRITICAL ANALYSIS OF EXISTING WORKLOAD AND STAFF REQUIREMENTS:

3.1. The activities and work load of Staff under SSE/W/TSK have already discussed in Chapter-II.

The Work Study Team critically examined the various activities & work load of SSE/Works/TSK according to the activity-wise observation it is seen that work load is in decreasing trend. The reason is that numbers of activities are either off loaded or some activities are becoming obsolete. More over now-a-days maximum works are done by the Railway through contractual basis where mere supervision lies on the part of SSE/Works.

3.2. EQUATED WORKLOAD OF SSE/WORKS/TSK

The Equated Plinth areas under SSE/WORKS/TSK are:

- i) Equated Plinth area of Residential Quarters = $4767.88 \times 0.7 = 3336.900$ Sq.m
- ii) Equated Plinth area of Service/Office Building = $45558.82 \times 1 = 45558.820$ Sq.m
- iii) Equated Plinth area of Road = $148655 \times 1 = 148655.00$ Sq.m
- iv) Equated Plinth area of Drains = $266.385 \times 1 = 266.385$ Sq.m
- v) Equated Plinth area of Bridge = $2327.325 \times 1.6 = 3723.72$ Sq.m

Total = 201540.8 Sq.m

3.3. Requirement of Technical Supervisor:

The workload of SSE/WORKS/ TSK, EPA in Sq.m. As recommended vide Diagnostic study Vol- II May'90 issued by RITES, the workload for an in charge may be 40,000 EPA in Sq.m.

Supervisor required = $201540.8 / 40000 = 5.038$ Nos.

Total = 5.038 Nos. (Say 5 Heads).

- i) Equated Plinth area of Residential Quarters = $4767.88 \times 0.7 = 3336.900$ Sq.m
- ii) Equated Plinth area of Service/Office Building = $45558.82 \times 1 = 45558.820$ Sq.m

Total EPA = 48895.72 Sq. mt

OTHER WORKS LOAD.

- 1) Road = 59462.00 Rm. = 59.462 Km
- 2) Drains Major = 689.35 Rm and Minor = 198.60 Rm. = 887.95 Rm (Total) $\times 0.3 \text{ mt} = 266.385 \text{ sq mt}$ (Average)
- 3) Bridge Major = 689.35 Rm Minor = 241.58 Rm . = 930.93 Rm(Total) $\times 2.5 \text{ mt} = 2327.325 \text{ sqmt}$
- 4) Level Crossing = Manned = 56 Nos Unmanned = Nil
- 5) Pipeline 52671.00 Rm.

If all the works have to cater departmentally without engaging out-agencies, the requirement of staff as below-

3.4. REQUIREMENT OF MASON-

1 mason per 1550 sqmt of EPA,

Total EPA = $48895.72 / 1550 = 31.55$ (say 31)

3.5. REQUIREMENT OF KHALASI-

1 Kh/Helper for each 5 Km of Road in RM

Road = 59462.00 Rm. = $59.462 / 5 = 11.892$ (Say 11)

AND

3 men (Fitter 1 + FPO 1+ KH 1) per 10 Km of pipe line

Length of Pipeline = 52671.00 Rm = 52.671 Km $\times 3 = 15.8$ (say 16).

Total requirement of Kh/Helper if work is done by departmental staff and materials is (11+5 =16), at present on roll strength is 10 out of Sanctioned strength = 19.

So the total staff is required , if all the works have to done by departmental staff and materials= 58

Present on roll strength is 21 out of sanctioned strength 38.

- 3.6.** To cater the work load and materials required for works, The Engg Department used to engage out-agencies through Zonal contract and other works contract linked with repairing works and works related to water supply.

The study team has observed that two nos. of zonal works C.A no –TSK 3473 DT-15/09/2017 & TSK 3456 Dt- 21/07/2017 (placed at SN/ & SN/) and another works contract related to water supply of validity till June/17 of CA No- 3148 dt 01/09/2015, Fresh tendering process is in progress.

- 3.7.** In view of engagement of out-agencies as discussed in above para-3.6, the redundancy of workload or off-loading of work load of certain category of staff is discussed below-

3.1. Work load of Carpenter:

The doors of all the Quarters are altering either by PVC or Iron, therefore the workload of Carpenters are reducing drastically. The present sanctioned strength is 07 Nos and on roll strength is 06 which seems to be adequate. One post of Carpenter Gr-II is vacant and recommended for surrender..

On the basis of present work load the study team suggests the sanctioned strength to 06 and 01 vacant posts **of. Gr-II- category** is recommended for surrender .

3.2. Work load of Painter:

The activities of **Painter** are not a routine work & reduced immensely for off loading of some activities. Mostly the work of painter is accomplished by contractually. This category is engaged for painting work of doors, windows of Railway buildings and premises, offices, station buildings etc. Presently these works are accomplished by the contractor/agency engaged.

3.3. Work load of FPO:

This category Known as Filter Plant Operator and employed for operating Filter Plants of Pump , but under SSE/W/TSK the water supply is done through deep tube well. Only at certain stations as mentioned below , the Filter Plants are operated at TSK.

The present sanction strength of this category is 07 Nos& running with 06 Nos of post which is sufficient to look after the pump house work. ***The present water supply work is under contractual vide Contract No. W/362/16/Water supply filter plant/KIR-II dated 05/05/2017***

The work study team also suggest that as the water supply of this station has become contractual, the FPO force may be utilized as is where is basis based on the concept of multi-skilling in Railway working..

On scrutinizing detailed work load and discussion with the concerned SSE & officers, the work study team proposed the BOS of FPO as 06 and 01 post of Gr-I category which is vacant may be surrender.

Therefore, 01 No of vacant FPO Gr-I category is recommended for surrender and may be deleted from BOS.

3.4. Work load of Helper:

This category is employed to assist the fitter in all categories like carpenter, mason, plumber, black smith etc to carry out maintenance work in Railway premises, rest houses,

As multiskilling concept is introduced in Railways working hence all artisan categories may be utilized as and when required. Therefore, for any specific work the necessity of Helper category is abolished.

Therefore, by considering the present scenario 02 vacant Posts of helper category is recommend for surrender.

3.5. SUMMARY OF PROPOSED SURPLUS STAFF UNDER SR.DEN/C/TSK

SN	CATEGORY	SCALE	G/PAY	BOS	ON ROLL	VACANCY	SURPLUS
1	Sr Tech Carpenter (MCM)	9300-34800	4200	02	00	02	02
2	Tech Carpenter Gr-I	5200-20200	2800	04	00	04	04
3	Tech Carpenter Gr-II	5200-20200	2400	01	00	01	
4	Tech Carpenter Gr-III	5200-20200	1900	01	02	-01	
5	Sr Tech Painter	9300-34800	4200	01	01	00	
6	Tech PainterGr- I	5200-20200	2800	02	01	01	01
7	Tech Painter Gr-II	5200-20200	2400	01	01	00	
8	Tech Painter Gr-III	5200-20200	1900	01	01	00	
9	Tech Black Smith Gr-I	5200-20200	2800	00	00	00	
10	Tech Black Smith Gr-II	5200-20200	2400	00	00	00	
11	Tech Black Smith Gr-III	5200-20200	1900	00	00	00	
12	Sr Tech Mason (MCM)	9300-34800	4200	01	00	01	
13	Tech Mason Gr-I	5200-20200	2800	02	02	00	
14	Tech Mason Gr-II	5200-20200	2400	00	00	00	
15	Tech Mason Gr-III	5200-20200	1900	00	00	00	
16	Tech S/Mason Gr-I	5200-20200	2800	01	02	-01	
17	Tech S/Mason Gr-II	5200-20200	2400	01	00	01	01
18	Sr Tech/Fitter	9300-34800	4200	01	00	01	
19	Tech/Fitter Gr-I	5200-20200	2800	02	01	01	01
20	Tech/Fitter Gr-II	5200-20200	2400	00	01	-01	
21	Tech/Fitter Gr-III	5200-20200	1900	01	00	01	01
22	SrTechFPO	9300-34800	4200	01	00	01	01
23	TechFPO Gr-I	5200-20200	2800	01	01	00	
24	TechFPO Gr-II	5200-20200	2400	01	01	00	
25	TechTWM Gr-I	5200-20200	2800	01	00	01	01
26	Khalashi,Khalasi Helper, V/M,F/M	5200-20200	1800	03	01	02	02
27	SWM	5200-20200	1800	02	02	00	
		TOTAL-		31	17	14	14

3.6. As discussed in abovepara 3.5, the study team observed that 14 nos of vacant posts of different categories (SrTech Carpenter = 2, Tech Carpenter Gr I = 4, Tech Painter Gr-I - 1, Tech S/Mason Gr-II – 1, Tech/Fitter Gr-I -1, Tech/Fitter Gr-III – 1, SrTechFPO -1, TechTWM Gr-I -1 &Khalasi Helper -2) are identified as surplus and proposed for surrender

CHAPTER-IV

RECOMMENDATION

The study team has identified 14 nos of vacant posts of different categories (Sr Tech Carpenter = 2, Tech Carpenter Gr I = 4, Tech Painter Gr-I - 1, Tech S/Mason Gr-II – 1, Tech/Fitter Gr-I -1, Tech/Fitter Gr-III – 1, SrTechFPO -1, TechTWM Gr-I -1 &Khalasi Helper -2) as surplus and proposed for surrender, which may be deleted from the working BOS.

CHAPTER-V

FINANCIAL IMPLICATION

EXPENDITURE / FINANCIAL SAVINGS PER ANNUM

5.0. The calculation of total expenditure Grade-wise is furnished below-

SN	Category	Pay Band	G/Pa y	Basic Pay in Rs	Revised Pay as per 7 th CPC	Salary per annum in INR	Nos of posts propose d for surrende r	Total amount in Rs	Total amount in Lakh Rs
1	Sr Tech Carpenter (MCM)	9300-34800	4200	26,250	67,462.5	8,09,550	2	16,19,100.	16.19
2	Tech Carpenter Gr-I	5200-20200	2800	24,850	63,864.	7,66,368	4	30,65,472	30.65
2	Tech Painter Gr- I	5200-20200	2800	24,850	63,864.	7,66,368	1	7,66,368	7.66
3	Tech S/Mason Gr-II	5200-20200	2400	15,100	38,807	4,65,684	1	4,65,684	4.65
4	Tech/Fitter Gr-I	5200-20200	2800	24,850	63,864.	7,66,368	1	7,66,368	7.66
5	Tech/Fitter Gr-III	5200-20200	1900	14,600	37,522	4,50,264	1	4,50,264	4.50
6	SrTechFPO	9300-34800	4200	26,250	67,462.5	8,09,550	1	8,09,550	8.09
7	TechTWM Gr-I	5200-20200	2800	24,850	63,864.	7,66,368	1	7,66,368	7.66
8	Khalasi Helper	5200-20200	1800	14,500	37,265	4,47,180	2	8,94,360	8.94
				TOTAL					Rs 96 Lakh (approx.)

5.1. PROJECTED FINANCIAL SAVINGS PER ANNUM- Rs.96Lakhs per annum

CHAPTER - VI

6.0. READY RECKONER

Pay Band	GP	Mean pay	Basic Pay in Rs	M.F. of 7 th CPC(2.57) & revised Pay	Salary per annum in INR
9300-34800	4600	22050	26,650	68,490.5	8,21,886
9300-34800	4200	22050	26,250	67,462.5	8,09,550
5200-20200	2800	12700	15,500	39,835	4,78,020
5200-20200	2400	12700	15,100	38,807	4,65,684
5200-20200	2000	12700	14,700	37,779	4,53,348
5200-20200	1900	12700	14,600	37,522	4,50,264
5200-20200	1800	12700	14,500	37,265	4,47,180

