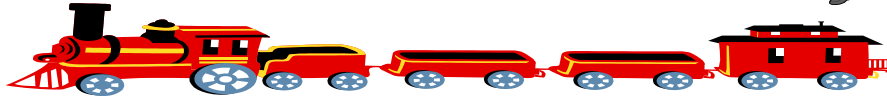


**WORK STUDY TO REVIEW THE STAFF**  
**STRENGTH OF SSE/TRAIN LIGHTING & AC**  
**OVER PALAKKAD DIVISION**

**No: G.275/WSSR – 281920/2019 - 20**



**SOUTHERN RAILWAY**

**PLANNING BRANCH**

**G.275 / WSSR- 281920 / 2019-20**

**WORK STUDY TO THE STAFF STRENGTH OF**  
**SSE/TL & AC OVER PGT DIVISION**

**STUDIED BY**

**WORK STUDY TEAM**  
**OF**  
**PLANNING BRANCH**

**JUNE 2020**



(i)  
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**ACKNOWLEDGEMENT**

The work study teams convey its sincere thanks to DEE/G/PGT, ADEE/G/PGT, SSE/E/HQ/PGT and SSE's/TL & AC of Electrical Department over PGT division for their valuable guidance and co-operation for conducting and completing the work study in time.

(ii)

**AUTHORITY**

Annual programmed of work study for the year 2019 - 20.

(iii)

**TERMS OF REFERENCE**

Work Study to review the staff strength of TL & AC units over PGT Division.

(iv)

**METHODOLOGY**

The following methodology has been adopted in conducting the above study.

1. Collection and compilation of data.
2. Interaction with field officials.
3. Based on Yard stick and need base.
4. Discussion with Officers.

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(v)

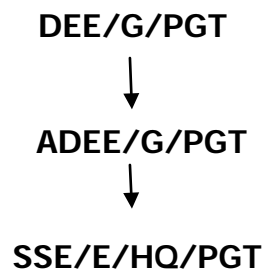
**REVISED RECOMMENDATIONS**

Sl no	Section	Designation	GP in Rs.	Surplus post
1	SSE/TL/PGT	Tech I	2800	01
2	SSE/TL/SRR	Tech I	2800	02
		Tech III	1900	02
3	SSE/TL/MAQ	Tech I	2800	02
		Helper	1800	02
4	SSE/AC/MAQ	Helper	1800	04
			Total	13

**Total posts : 13**


**CHAPTER- I****1.0 INTRODUCTION**

- 1.1 **PALAKKAD** is one of the sixth division in Southern Railway. Number of trains originating /terminating in this division is more. Due to this, the electrical maintenance activities like Primary, Secondary, Sick line attention of Air Conditioned & Non-Air Conditioned Coaches (Train lighting) and Power utilization also more in various depots.
- 1.2 Even though there are various wings in the electrical branch, this study is pertaining to Train Lighting & AC staffs over PGT division.
- 1.3 Electrical power (General Service) is a separate wing, which deals with the arrangement of receiving electrical power from the State Electricity Boards and distribution up to the end user points.
- 1.4 The Electrical department (General Service) at PGT Division is presently headed by Divisional Electrical Engineer & assisted by ADEE's. The organizational set up is as below :-



- 1.5 An analysis is made to study the manpower requirement for Train Lighting & AC units over PGT division for the present level of workload based on Yard stick and need basis.

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**CHAPTER- II****2.0 PRESENT SCENARIO :**

2.1 The sanctioned and actual strength of Train Lighting & AC units over PGT Division are furnished in **Annexure – I.**

**2.2 The jurisdiction of Electrical power, TL & AC over PGT Division is as follows.**

SSE/P, TL & AC /PGT : MDKI – OTP – PGT – POY – CNV covering 78 kms  
 SSE/P, TL & AC /SRR : MNUR – TIR – SRR - NIL covering 65 kms  
 SSE/P & TL/CLT : TA – MAHE covering 99 kms  
 SSE/P & TL /CAN : JGE – CHV covering 73 kms  
 SSE/TL & AC/MAQ : NLE – MAQ, MAQ – PNMB, MAQ – BUNDER covering 108 kms  
 SSE/E/HQ/PGT : General administration

**2.3 The work load of Train Lighting (TL) and Air Conditioned (AC) units has been classified in to the following activities**

- (a) Primary Maintenance of Passenger & Mail/Express coaches owned by PGT division at SRR & MAQ depots.
- (b) Secondary Maintenance of coaches belonging to other depots done at MAQ & SRR is termed as other End Maintenance.
- (c) PF turn round attention : For some trains the link timings may be so tight, hence they cannot be moved to the pit lines of the depot for a secondary maintenance at the non-parent depot. Even then, some maintenance, checking is essential at the end of the journey within time gap of 3 – 6 hours generally.
- (d) Train Passing Duties : Though the checks conducted by Electrical depots cannot be compared to the Mechanical Branch, it helps to detect some failures. The complaints reported to the SMs/Guards, Ticket examiners and others can be attended if the stopping time is more than 10 minutes or so. Such train passing checks are not required within 200km of another check. However this is being done by TLD & AC staff at PGT, SRR, CLT, CAN & MAQ.
- (e) Sick Line Attendance: This activity is conducted on separate sick lines after detaching the coaches which cannot be made fit along with other coaches of the same rake.
- (f) Miscellaneous activities like attending tourist coaches, special trains, other depot inspection BD special like ART, SPART, ARME, etc.,

**2.4 Roof Checking (TL)**

There are 27-31 numbers of fans and 37 – 41 light points available in each carriage. The check required mainly for carbon brushes, spring, noise level, bearing, blade fault, guard fault, current leakage, earth leakage, individual switches, fuse link, rotary switches, emergency lights, cell phone charger and general wiring condition.

**2.5 The maintenance and manning of AC Coaches.**

There is a clear yardstick for the requirement of both maintenance and manning of AC coaches. The same was revised after contracting the maintenance of Roof Mounted Package Units (RMPU) fitted AC Coaches. It has considerably reduced the activities of

maintenance staff. At present the main activity is with regard to Under slung A/C coaches. But in MAQ there is no under slung AC coaches all are RMPU coaches.

- 2.6 The present staff strength of TL & AC staffs over PGT division is 191 against the sanctioned strength of 226.
- 2.7 At PGT there is no pit line only Platform turn round attentions.
- 2.8 At SRR there are 1 pit lines with Primary and Secondary Maintenance and 1 IOH lines in C & W depot.
- 2.9 At CLT there is no pit lines only Platform turn round attentions.
- 2.10 At CAN there is no pit lines only Platform turn round attentions.
- 2.11 At MAQ there are 3 pit lines with Primary and Secondary Maintenance & 1 sick line with pit.
- 2.12 SSE/TL/PGT

TL /PGT	
Head Qrts & Jurisdiction No of Stations	PGT, PGT – OTP, PGT – MDKI, PGT – POY, POY - KNV 15
Category	A Category
No. of train stoppage	52 Pairs
No. of Platforms	5
No. of circulating area	02
Sub stations	PGT, Division office, RH/PGT

Staff details				
Category	San	Act	Vac	Exc
SSE	04	02	02	--
JE	03	02	01	--
Sr.TECH/TL	02	01	01	--
TECH I/TL	05	04	01	--
TECH II/TL	02	02	--	--
TECH III/TL	01	--	01	--
HELPER/TL	05	04	01	--
Total	22	15	07	--

- 2.13 Section details of SSE/TL /SRR

TL /SRR	
Head Qrts & Jurisdiction No of Stations	SRR, MNUR – SRR – TIR & SRR – NIL 21
Category	A Category
No. of train stoppage	48 Pairs
No. of Platforms	5
FOB	FOB available connecting all platforms
No. of circulating area	01



Staff details				
Category	San	Act	Vac	Exc
SSE	02	01	01	--
JE	01	01	--	--
Sr.TECH/TL	06	08	-	02
TECH I/TL	14	09	05	--
TECH II/TL	02	06	--	04
TECH III/TL	04	--	04	--
HELPER/TL	12	12	--	--
Total	41	37	10	06

#### 2.14 Section details of SSE/TL /CLT

TL /CLT	
Head Qrts & Jurisdiction	CLT, TA – MAHE
No of Stations	20
Category	A Category
No. of train stoppage	45 Pairs
No. of Platforms	5
FOB	FOB available connecting all platforms
No. of circulating area	02

Staff details				
Category	San	Act	Vac	Exc
SSE	02	02	--	--
JE	01	--	01	--
Sr.TECH/TL	01	01	-	--
TECH I/TL	02	01	01	--
TECH II/TL	01	--	01	--
TECH III/TL	01	02	--	01
HELPER/TL	04	04	--	--
Total	12	10	03	01

#### 2.15 Section details of SSE/TL /CAN

TL /CAN	
Head Qrts & Jurisdiction	CAN, JGE - CHV
No of Stations	21
Category	A Category
No. of train stoppage	34 Pairs
No. of Platforms	4
FOB	FOB available connecting all platforms
No. of circulating area	02
Lift & Escalators	CAN & TLY

Staff details				
Category	San	Act	Vac	Exc
SSE	01	02	--	01
JE	--	--	--	--
Sr.TECH/TL	01	01	--	--
TECH I/TL	02	--	02	--
TECH II/TL	01	02	--	01
TECH III/TL	01	01	--	--
HELPER/TL	04	04	--	--
Total	10	10	02	02

## 2.16 Section details of SSE/TL & AC/MAQ

TL & AC/MAQ	
Head Qrts & Jurisdiction	MAQ, ULL – NLE & MAQ – PNMB
No of Stations	14
Category	A Category
No. of train stoppage	38 Pairs
No. of Platforms	5
FOB	FOB available connecting all platforms
No. of circulating area	02
Depots	MAQ & MAJN station

Staff details				
Category	San	Act	Vac	Exc
SSE	03	03	--	--
JE	02	01	01	--
Sr.TECH/TL	17	14	03	--
TECH I/TL	30	12	18	--
TECH II/TL	03	13	--	10
TECH III/TL	08	06	02	--
HELPER/TL	22	20	02	--
Total	85	69	26	10

Staff details				
Category	San	Act	Vac	Exc
Sr.TECH/AC	09	08	01	--
TECH I/AC	17	10	07	--
TECH II/AC	02	05	--	03
TECH III/AC	05	05	--	--
ACCA	23	22	01	--
Total	56	50	09	03

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

- 3.1 The PGT, SRR, CLT, CAN & MAQ Train Lighting (TL) and AC staff gives attention to coaches mainly based on the following four aspects.
- Primary Maintenance of AC and Non-AC (TL) Coaches
  - Secondary Maintenance of AC and Non-AC (TL) Coaches
  - Sick line attention to AC and Non-AC (TL) Coaches
  - Escorting / Manning of AC Coaches
- 3.2 Railway Board Bench Marking Norms for provision of staff for AC & TL Coaches vide no. E(MPP)2019/1/12 dt. 30/09/2019 (Revision of Yardsticks)

Activity	Yardstick
<b>TL Coaches</b>	
a) Primary maintenance SG TL/LHB TL coaches	0.24 staff per coach holding for primary maintenance
b) Secondary maintenance SG/TL/LHB TL coaches	0.15 staff per coach handled for secondary maintenance
c) Sick line attention	0.05 staff per coach holding
d) Train passing for both AC & TL Coaches	0.05 staffs per coach holding
<b>AC Coaches</b>	
a) Primary Maintenance: -  ICF & LHB (Linke Hofmann Busch) SGAC coach with RMPU  ICF & LHB EOG (End on Generator) AC coach with RMPU	1.10 staff / coach holding for Primary Maintenance.  0.8 staff / coach holding for Primary Maintenance.
b) Secondary Maintenance: -  ICF & LHB (Linke Hofmann Busch) SGAC coach with RMPU ICF & LHB EOG (End on Generator) AC coach with RMPU	0.46 staff / coach holding for Secondary Maintenance. 0.36 staff / coach holding for Secondary Maintenance.
C) Sick line attention	0.20 per coach

3.3 The details of AC and Non-AC Coaches for Other end attention (OEA) at PGT & PGTN are as follows.

Train No	Frequency	No of Rakes	No of Coaches
56610/11	Daily	01	12
66611/12	Except Tue	01	08
16791/92	Daily	01	11
22651/52	Daily	01	17
56769/70	Daily	01	10
56712/13	Daily	01	13
66606/07	Except Sun	01	08
Total		07	79

3.4 The details of AC and Non-AC Coaches for Primary maintenance and Other end attention (OEA) at SRR & NIL are as follows.

- Other end attention at SRR & NIL

Train No	Frequency	No of Rakes	No of Coaches
16301/02	Daily	01	23
56364/61	Daily	01	16
16349/50	Daily	01	13
56362/63	Daily	01	14
Total		04	66

- Primary maintenance at SRR

Train No	Frequency	No of Rakes	No of Coaches	Total
56621/12, 56613 – 56616 – 56617/56610 - 56611, 56614 – 56619 - 56620	Daily	03	12	36
56601 – 56600 – 56604/06709 – 56709, 56710 – 06710/56605 – 56603 - 56602	Daily	04	12	48
Total		07	24	84

3.5 The details of AC and Non-AC Coaches for Other end attention (OEA) at CLT are as follows.

- Other end attention

Train No	Frequency	No of Rakes	No of Coaches
12075/76	Daily	01	18
56601/64	Daily	01	12
56654/57	Daily	01	16

56652/64	Daily	01	16
56663/53	Daily	01	16
Total		05	78

3.6 The details of AC and Non-AC Coaches for Other end attention (OEA) at CAN are as follows.

- Other end attention

Train No	Frequency	No of Rakes	No of Coaches
16517/18	Mon, Tue & Wed	01	09
16511/12	Thu, Fri, Sat & Sun	01	09
16527/28	Daily	01	21
16305/08	Daily	01	20
16307/06	Daily	01	20
12081/82	Wed & Sun	01	18
56603/02	Daily	01	12
56652/57	Daily	01	16
56653/59	Daily	01	16
56656/50	Daily	01	16
56651/55	Daily	01	16
Total		11	173

3.7 The details of AC and Non-AC Coaches for Primary maintenance and Other end attention (OEA) at MAQ & MAJN are as follows.

- Other end attention/MAQ :

Train No	Frequency	No of Rakes	No of Coaches
16650/49	Mon, Tue & Fri	01	21
16604/02	Daily	01	23
12601/30	Daily	01	23
16606/09	Daily	01	19
16347/20	Daily	01	22
12619/48	Daily	01	22
12685/86	Daily	01	22
16855/56	Fri	01	16
16857/58	Sat	01	21
16859/60	Daily	01	21
16565/66	Mon	01	18
17605/06	Wed & Sat	01	17
22635/36	Expect Wed & Sat	01	17
56323/24	Daily	01	17

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70105/06	Except Sun	01	08
56644/43	Except Wed & Sat	01	05
56646/45	Except Wed & Sat	01	05
56642/47	Except Wed & Sat	01	05
56441/40	Except Wed & Sat	01	16
Total		19	318

- Other end attention/MAJN

Train No	Frequency	No of Rakes	No of Coaches
12133/34	Daily	01	17
16575/76	Mon, Wed, Fri	01	14
16355/56	Fri & Sun	01	18
Total		03	49

- Primary maintenance TL coaches of Mail/Express trains at MAQ

Train No	Frequency	No of Rakes	No of TL Coaches	Total
16603/04, 12601/22637	Daily	04	18	72
22637/12601 16630/29	Daily	04	18	72
16649/50	Tue, Wed, Fri, Sat	02	18	36
22636/35	Mon & Thu	01	08	08
16605/06 22610/09	Daily	04	19	76
16687/88	Mon	01	10	10
56654/57/52/64/63/53/5 9/61/56/50/51/55	Daily	06	16	96
56642/47/46/45/44	Sat & Tue	01	05	05
56640/41	Mon & Thu	01	16	16
Total				391

- Secondary maintenance of TL coaches of Mail/Express trains at MAQ

Train No	Frequency	No of Rakes	No of Coaches	Total
22685/86	Weekly Vivek express	01	23	23

- Primary maintenance of AC coaches of Mail/Express trains at MAQ

Train No	Frequency	No of Rakes	No of Coaches	Total
16603/04, 12602/22637	Daily	04	06	24
22638/12601, 16630/29	Daily	04	06	24
16687/88	Mon	01	03	03
16649/50	Tue, Wed, Fri, Sat	02	03	06
16605/06, 22609/10	Sat	04	02	08
Total				65

- Secondary maintenance of AC coaches of Mail/Express trains at MAQ

Train No	Frequency	No of Rakes	No of Coaches	Total
22852/51	Weekly express	01	06	06

### 3.8 Roster details for primary maintenance of trains/week at SRR

Days	General shift 08.00 to 17.00	Rakes/Total Coaches
Sun to Mon	56621 – 12/56613 – 16 – 17/56610 – 11/56614 – 19 -20	3 rakes x 12 coaches = 36
	56601 – 600 – 604/06709 – 10/56709 – 10/56605 – 03 – 02	4 rakes x 12 coaches = 48
Total		7 rakes = 84

### 3.9 Roster details for primary maintenance of trains/week at MAQ

Days	06.00 to 14.00	14.00 to 22.00	22.00 to 06.00
Sun to Mon	6603/04, 12602/22637, 16687/88	22638/12601, 16630/29, 16605/06, 56654/57, 56652/64, 56663/53, 56656/59, 56661/56, 56650/51/55	16649/50, 22636/35, 22610/09, 56642/47, 56646/45/44/40/41

### 3.10 Train passing/Platform turn round duties at PGT & PGTN

No of coaches per day for Platform turn round at PGT : 58

No of coaches per day for Platform turn round at PGTN : 21

Total PFTR coaches at PGT & PGTN is 79

Yardstick for PFTR/Train passing is 0.05 staff per coach holding.

79 Coaches x 0.05 staff = 3.95 say 4 staffs as per yardstick.

In addition to that, the following works done by TL staffs at PGT station

- Rolling in examination of all passing trains
- Attending a electrical complaints in passing trains
- Charging and periodical checking of electrical appliances in DRM and other HODs Inspection saloons
- Checking of Break down specials, ARME as per schedules

For the above work load, additional 9 staffs is allowed on need basis including LR/RG

- PFTR/Train passing & other activities at PGT - 3 TECH + 3 Helper/day (Round the clock)
- PFTR/Train passing at PGTN on need basis - 1 Helper during night shift
- Rolling in examinations on need basis - 3 TECH per day (Round the clock)
- LR/RG for 6 TECH is 2 and for 4 Helper is 1, hence total staffs requirement for TL depots is 8 TECH + 5 Helper = 13 staffs and the remaining 2 vacant post of Technicians is surplus to the requirement.

#### SANCTION Vs REQUIREMENT at PGT/TL

Desig	Sanction	Actual	Requirement	Surplus
SSE	4	2	4	--
JE	3	2	2	1
Sr.Tech/TL	2	1	2	--
Tech I/TL	5	4	4	1
Tech II/TL	2	2	2	--
Tech III/TL	1	-	1	-
Helper/TL	5	4	5	--
Total	22	15	20	2

#### 3.11 Primary Maintenance of TL (Non-AC) Section at SRR

The manpower requirement of TL (Non-AC) coaches for Primary & Secondary maintenance/day is based on yardstick including RG as follows.

##### Primary maintenance:

TL (Non-AC) Coach holding	= 84
Total TL coaches manning per day	= 24
Manpower required as per yardstick is	
TL(Non-AC) coaches/day = 24 x 0.24 = 5.7 + 5 on need basis	= 10.7
is allowed for maintaining Saloons, ART & SPART	
Train passing Duties/PFTR = 56 x 0.05 = 2.8 + 1 on need basis	= 3.8
	-----
	14.5
Sick Line Activities (IOH) :	6.0

(1 x 0.05 = 0.05) but presently for Sick line activities 6 staffs is deputed and the same is allowed as it is on need basis

Rolling in Examinations of coaches on need basis	3.0
For PFTR trains @ NIL station on need basis	2.0
Total	25.5
RG @ 16.6 % (25.5 x 16.6/100 = 4.2)	4.2



LR @ 12.5 %  $(29.7 \times 12.5/100 = 3.7)$  3.7

Requirement of staff : 33.4 say 34 staffs

#### SANCTION Vs REQUIREMENT at SRR/TL

Desig	Sanction	Actual	Requirement	Surplus
SSE	2	1	2	--
JE	1	1	1	--
Sr.Tech/TL	6	8	6	--
Tech I/TL	14	9	12	2
Tech II/TL	2	6	2	--
Tech III/TL	4	-	2	2
Helper/TL & IOH	12	12	12	--
Total	41	37	37	4

#### 3.12 Train passing / Platform turn round duties at CLT

No of coaches per day for Platform turn round at CLT : 78

Yardstick for PFTR/Train passing is 0.05 staff per coach holding.

78 coaches x 0.05 staff = 3.9 staffs say 4 as per yardstick

In addition to that, the following works done by TL staffs at CLT station

- Rolling in examination of all passing trains
- Attending a complaints in passing trains
- Charging and checking of HODs saloons
- Checking of Break down specials as per schedules

For the above work load, additional 8 staffs is allowed on need basis

- PFTR/Train passing & other activities at CLT - 3 TECH + 3 Helper per day (Round the clock)
  - Rolling in examinations on need basis - 1 TECH
- LR/RG for 4 TECH is 1 and for 3 Helper is 1, hence total staffs requirement for TL depots is 5 TECH + 4 Helper = 9 staffs is allowed as it is.

#### SANCTION Vs REQUIREMENT at CLT/TL

Desig	Sanction	Actual	Requirement	Surplus
SSE	2	2	2	--
JE	1	-	1	--
Sr.Tech/TL	1	1	1	--
Tech I/TL	2	1	2	--
Tech II/TL	1	--	1	--
Tech III/TL	1	2	1	--
Helper/TL	4	4	4	--
Total	12	10	12	--

### 3.13 Train passing / Platform turn round duties at CAN

No of coaches per day for Platform turn round at CAN : 173

Yardstick for PFTR/Train passing is 0.05 staff per coach holding.

173 coaches x 0.05 staff = 8.6 staffs say 9 as per yardstick

In addition to that, the following works done by TL staffs at CLT station

- Rolling in examination of all passing trains
- Attending a complaints in passing trains
- Charging and checking of HODs saloons
- Checking of Break down specials as per schedules

Deployment of TL staffs as per above work load

- PFTR/Train passing & other activities at CAN - 3 TECH + 3 Helper per day (Round the clock)
- Rolling in examinations on need basis - 1 TECH  
LR/RG for 4 TECH is 1 and for 3 Helper is 1, hence total staffs requirement for TL depot is 5 TECH + 4 Helper = 9 staffs is allowed as it is.

SANCTION Vs REQUIREMENT at CAN/TL

Desig	Sanction	Actual	Requirement	Surplus
SSE	1	2	1	--
JE	--	--	--	--
Sr.Tech/TL	1	1	1	--
Tech I/TL	2	--	2	--
Tech II/TL	1	2	1	--
Tech III/TL	1	1	1	--
Helper/TL	4	4	4	--
Total	10	10	10	--

### 3.14 Primary & Secondary Maintenance of TL (Non-AC) at MAQ

The manpower requirement of TL (Non-AC) coaches for Primary & Secondary maintenance/day is based on yardstick including RG as follows.

Primary maintenance:

TL (Non-AC) Coach holding = 391(387 + 4 spare)

Total TL (Non-AC) coaches/day = 189

Manpower required as per yardstick is

TL (Non-AC) coaches/day = 189 x 0.24 = 45.36

Train passing Duties/PFTR @ MAQ = 93 x 0.05 = 4.65

Train passing Duties/PFTR @ MAJN = 49 x 0.05 = 2.45

Sick Line Activities = 6.0

(2 x 0.05 = 0.1) but presently for Sick line activities 6 staffs is deputed and the same is allowed as it is on need basis

Secondary maintenance

TL(Non – AC) Coach holding = 20

Manpower required as per yardstick is

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TL (Non-AC) coaches/day = $20 \times 0.15 =$	3.0
Total	61.46
RG @ 16.6 % ( $61.46 \times 16.6/100 = 10.20$ )	10.20
LR @ 12.5 % ( $71.66 \times 12.5/100 = 8.9$ )	8.9
Requirement of staff :	80.56 say 81

## SANCTION Vs REQUIREMENT at MAQ &amp; MAJN/TL

Desig	Sanction	Actual	Requirement	Surplus
SSE	03	03	03	--
JE	02	01	02	--
Sr.Tech/TL	17	14	17	--
Tech I/TL	30	12	28	02
Tech II/TL	03	13	03	--
Tech III/TL	08	06	08	--
Helper/TL	22	20	20	02
Total	85	69	81	04

3.15 Primary maintenance of AC Coaches :

AC - Coach holding	= 68 (65 + 3 spare)
RMPU type AC coaches/day $18 \times 1.10$	= 19.8
Train passing/PFTR for AC coaches/day ( $25 \times 0.05 = 1.25$ )	= 1.25
Sick line attention ( $2 \times 0.20 = 0.40$ )	= 0.40

## 3.16 Requirement for train manning staff based on the present working pattern at MAQ is as under:

T.No	Frequency	No. of Rakes	No. of coaches	Bedroll Supply	No. of accompanying staff / Rake		Total staff deployed
					ACCIC	ACCA	
16649/50	Tue, Wed, Fri, Sat	02	03	Nil	02	--	02
22609/10	Daily	02	02	Nil	02	--	02
16605/06	Daily	02	02	Nil	02	--	02
16687/88	Mon	01	03	Nil	01	--	01
16603/04/ 12602/ 22637	Daily	02	06	Nil	02	02	04
22638/ 12601/ 16630/29	Daily	02	06	Nil	02	02	04
Total					11	04	15

**3.17 Secondary maintenance of AC Coaches :**

AC coach holding	= 06
RMPU type AC coaches/week	= 06
RMPU type AC coaches/day 6 x 0.46	= 2.76
Total staffs	24.21
ACM	11.00
ACCA	4.00
Total	39.21
RG @ 16.6%(39.21 X 16.6/100)	6.50
LR @ 12.5%(45.71 X 12.5/100)	5.71
Total staffs required	51.42 say 52

**SANCTION Vs REQUIREMENT at MAQ/AC**

Category	Sanction	Actual	Requirement	Surplus
Sr.TECH/AC	09	08	09	--
TECH I/AC	17	10	17	--
TECH II/AC	02	05	02	--
TECH III/AC	05	05	05	--
ACCA/Helpers	23	22	19	04
Total	56	50	52	04

Requirement of TL & AC staffs over PGT division in various section is here under :

Sl. No	Section	Sanction	Actual	Requirement	Surplus
1	SSE/TL/PGT	22	15	20	02
2	SSE/TL/SRR	41	37	37	04
3	SSE/TL/CLT	12	10	12	--
4	SEE/TL/CAN	10	10	10	--
5	SSE/TL/MAQ	85	69	81	04
6	SSE/AC/MAQ	56	50	52	04
	Total	226	191	212	14

**Recommendations :**

Sl no	Section	Designation	GP in Rs.	Surplus post
1	SSE/TL/PGT	JE Tech I	4200 2800	01 01
2	SSE/TL/SRR	Tech I Tech III	2800 1900	02 02
3	SSE/TL/MAQ	Tech I Helper	2800 1800	02 02
4	SSE/AC/MAQ	Helper	1800	04
			Total	14

**CHAPTER – IV****4 . The Coordinating Officer views and Planning Branch remarks****- Co – ordination officer views**

Work study team have shown the requirement of AC/MAQ depot in pages 15 & 16 of the report. But the calculation found wrong as the number of rakes and coaches taken is not correct.

**- Planning branch remarks**

Coach holding of AC depot/MAQ is 68 (65 + 3 Spare coaches) and its primary maintenance per day is 19.8 + secondary maintenance is 6 coaches (weekly express on Saturday) and its manpower requirement was arrived as per Railway board yardstick including LR/RG.

For manning AC coaches 11 ACM (AC mechanics) + 04 ACCA is allowed as per the movement of incoming/outgoing rakes

16649/50(Parasuram express) is two rakes – 2 ACM

22609/10(Intercity express) is two rakes – 2 ACM

16605/06(Ernad express) is two rakes – 2 ACM

16687/88(Navyug express) is single rake – 1 ACM

Maveli express (16604) is the outgoing rake of 16603 - 1 ACM + 1 ACCA

Mangalore mail (12601) is the outgoing rake of West coast express (22638) – 1 ACM + 1 ACCA

West coast express (22637) is the outgoing rake of Chennai mail (12602) – 1 ACM + 1ACCA

Malabar express (16630) is the outgoing rake of 16629 – 1 ACM + 1 ACCA

So the requirement of ACM & ACCAs arrived in the work study report is sufficient based on the movement of rakes. Hence the recommendations made in the work study draft is stands good.

**- Co – ordination officer remarks**

Work study team didn't take electrical general service segregation as Power, Train lighting, AC coaching (page no.5 PGT depot). Instead it was taken as one single entity and remarks has been given that one JE post surplus. SSE & JE posts are common for Power, TL and AC activities. Hence one JE post noted as surplus cannot be justified.

- **Planning branch remarks**

Agreed to and work study team considered 1 JE post.

- **Co – ordination officer views**

IOH activities are increased as 2 coaches/day against the earlier target of 1 coach/day at IOH shed/ SRR are hence the staff requirement is more.

- **Planning branch views**

During work study inspection it was observed that SRR Electrical depot doing IOH activities - 1 coach per day by deputing 6 TL staffs during 08hrs – 17hrs. As per railway board yardsticks 0.05 staffs i.e. 4.2 staff are required, but the work study team allowed the existing 6 staffs on need basis and it is sufficient.

- **Co – ordination officer views**

The finding of the work study team about the number of primary maintenance rakes at MAQ is not correct. Hence the calculation of staff for the maintenance of these rakes at TL/MAQ also not correct and actual requirement of staff is more than the sanctioned numbers.

Declared special trains and military special trains, exhibition trains, etc are also need attention of TL & AC staffs and these are not considered in the calculation.

- **Planning branch views**

Coaching holding at MAQ/TL depot is 391 (387 + 4 spare)

Primary maintenance of coaches per day is 160 as per roster of TL/MAQ

Work study team was taken as 189 coaches per day for primary maintenance it includes all the special trains, military specials, salons, exhibition trains, ART & ARME and daily regular coaches.

Work study team arrives the requirement as 81 staffs (it includes LR/RG) against the sanction of 85 based on yardstick and need basis and remaining 4 post is surplus, hence the recommendation made in work study draft is stand good.

**REVISED RECOMMENDATIONS**

SI	Section	Designation	GP in Rs.	Surplus
1	SSE/TL/PGT	Tech I	2800	01
2	SSE/TL/SRR	Tech I	2800	02
		Tech III	1900	02
3	SSE/TL/MAQ	Tech I	2800	02
		Helper	1800	02
4	SSE/AC/MAQ	Helper	1800	04
Total				13

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**CHAPTER – V****5.0 FINANCIAL SAVINGS**

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

Sl no	Section	Designation	GP in Rs.	Surplus post	Money value Rs.	Total financial savings Rs.
1	SSE/TL/PGT	Tech I	2800	01	68040	816480
2	SSE/TL/SRR	Tech I	2800	02	68040	1632960
		Tech III	1900	02	46536	1116864
3	SSE/TL/MAQ	Tech I	2800	02	68040	1632960
		Helper	1800	02	41944	1006656
4	SSE/AC/MAQ	Helper	1800	04	41944	503328
Total				13		6709248

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**Annexure I****Scale Check Statement of SSE/Train Lighting & AC Staffs over PGT Division**

	SI.No	Designation	G.P in Rs.	S	A	V	E
TL/PGT	1	SSE	4600	04	02	02	--
	2	JE	4200	03	02	01	--
	3	Sr.Tech	4200	02	01	01	--
	4	Tech. I	2800	05	04	01	--
	5	Tech. II	2400	02	02	--	--
	6	Tech.III	1900	01	--	01	--
	7	Helper/TL	1800	05	04	01	--
Total				22	15	07	--
TL/SRR	1	SSE	4600	02	01	01	--
	2	JE	4200	01	01	--	--
	3	Sr.Tech	4200	06	08	--	02
	4	Tech. I	2800	14	09	05	--
	5	Tech. II	2400	02	06	--	04
	6	Tech.III	1900	04	--	04	--
	7	Helper/TL & IOH	1800	12	12	-	--
Total				41	37	10	06
TL/CLT	1	SSE	4600	02	02	--	--
	2	JE	4200	01	--	01	--
	3	Sr.Tech	4200	01	01	--	--
	4	Tech. I	2800	02	01	01	--
	5	Tech. II	2400	01	--	01	--
	6	Tech.III	1900	01	02	--	01
	7	Helper/TL	1800	04	04	--	--
Total				12	10	03	01
TL/CAN	1	SSE	4600	01	02	--	01
	2	JE	4200	--	--	--	--
	3	Sr.Tech	4200	01	01	--	--
	4	Tech. I	2800	02	--	02	--
	5	Tech. II	2400	01	02	--	01
	6	Tech.III	1900	01	01	--	--
	7	Helper/TL	1800	04	04	--	--
Total				10	10	02	02



TL/MAQ	1	SSE	4600	03	03	--	--
	2	JE	4200	02	01	01	--
	3	Sr.Tech	4200	17	14	03	
	4	Tech. I	2800	30	12	18	--
	5	Tech. II	2400	03	13	--	10
	6	Tech.III	1900	08	06	02	--
	7	Helper/TL	1800	22	20	02	--
Total				85	69	26	10
AC/MAQ	1	SSE	4600	--	--	--	--
	2	JE	4200	--	--	--	--
	3	Sr.Tech	4200	09	08	01	--
	4	Tech. I	2800	17	10	07	--
	5	Tech. II	2400	02	05	--	03
	6	Tech.III	1900	05	05	--	--
	7	Helper/AC	1800	--	--	--	--
	8	ACCA	1800	23	22	01	--
Total				56	50	09	03
Grant total				226	191	57	22

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