HANDOUT
Of
EMU CARSHED TIKIAPARA,
PKU & MEMU CAR SHED KGP



EMU CAR SHED, TIKIAPARA
S. E. RAILWAY

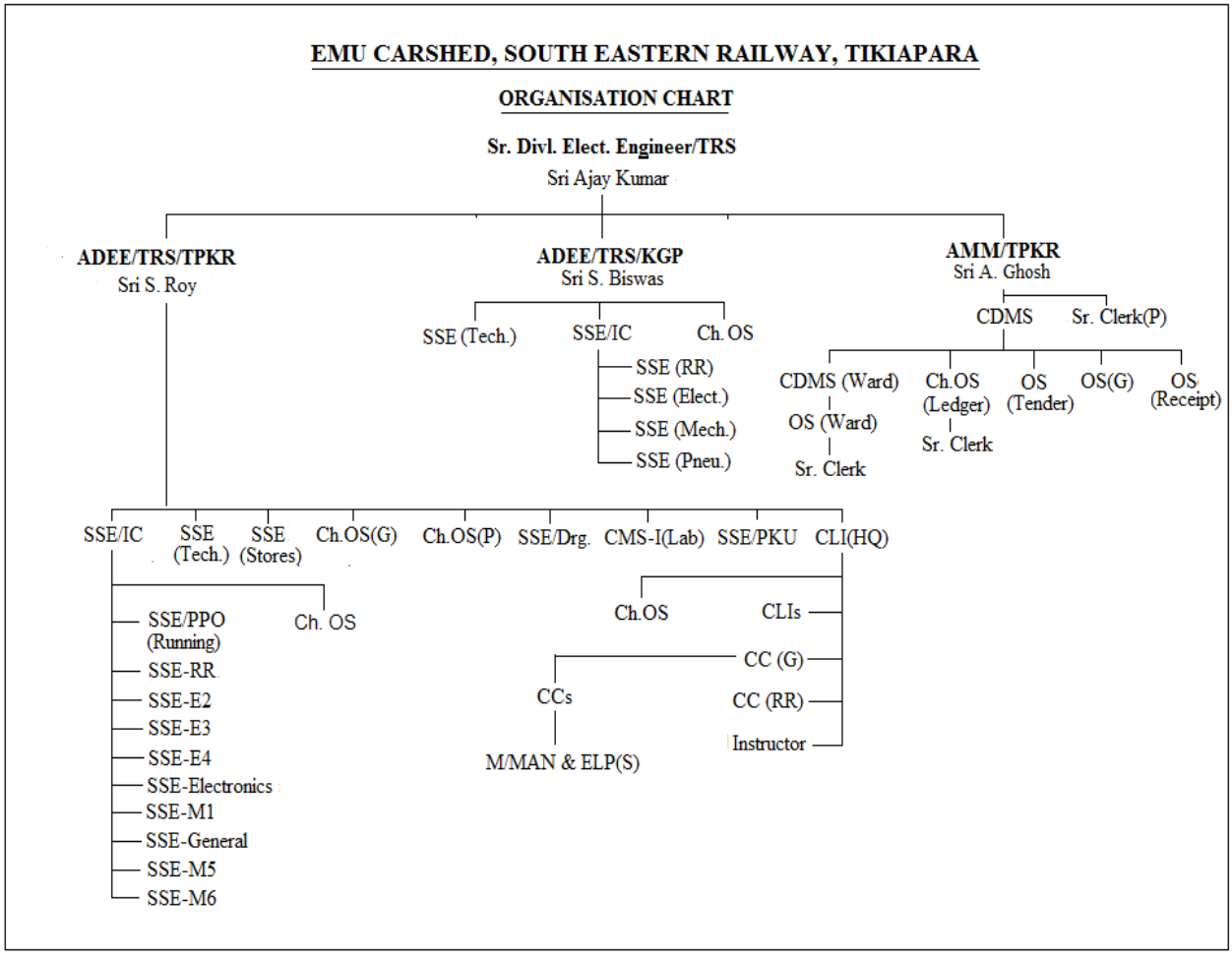
EMU CAR SHED, TIKIAPARA

1.0 BRIEF HISTORY:

- The EMU services made their debut on S. E. Railway on 01.05.1968 on Howrah – Panskura section of Kharagpur Division.
- In due course, the services were extended to Kharagpur / Midnapore and other sections viz. Panskura – Haldia, Santragachi – Amta, Santragachi – Shalimar and Tamluk-Digha.
- The shed made it's humble beginning when seven numbers of 4 coach units brought from ICF and first EMU service started.

- Similarly the MEMU services were introduced in this railway in Howrah – Kharagpur section on 15.07.95.
- Further the services were extended in KGP-TATA, KGP-ADA, ADA-ASN, ADA- BQA, TATA-DHN, BQA-BJE, KGP-BLS, KGP-PRR, TATA-CKP, CKP-GMO, VSU-ASN & RNC-TORI sections.

2.0 ORGANISATION SET UP:



3.0 HOLDING (as on 01.09.2022):

	EMU	MEMU
Motor Coach	136	80
Trailer Coach	252	245
No. of rakes	31 (All EMU rakes are of 12-car formation)	35 (10 nos. 12-car, 19 nos. Conv.8-car & 6 nos. 3-phase 8-car of M/s BEML))

3 more 3-phase MEMU of M/ BHEL is under commissioning.

4.0 TYPES OF STOCK (EMU & MEMU):

- Conventional EMU rakes with coil spring in secondary suspension.
- Air Suspension EMU rake with Air spring in secondary suspension.
- 3-Phase EMU rake with IGBT based 3-phase propulsion system (16 including conical spring rake).
- 3-Phase EMU rake with IGBT based 3-phase propulsion system and conical spring in primary suspension (2 nos.).
- Conventional MEMU rakes with coil spring in secondary.
- Air Suspension MEMU rake with Air spring in secondary suspension
- 3-Phase MEMU with Air spring in secondary suspension.

5.0 LINE CAPACITY (TPKR, PKU & MEMU shed KGP):

EMU CAR SHED TPKR:

- Inspection - 2 lines (I1 & I2)
- Stabling (With pit) - 4 lines (S1, S2, S3 & S4)
- Heavy lifting bay - 2 lines (L1 & L2)
- Stabling (without pit-3) & Washing (1) - 4 lines
- Shunting neck - Both ends (for 12- coach rake shunting not possible at HWH end)

EMU TRIP SHED PANSKURA:

- Inspection/Stabling (With pit) - 2 lines.
- Stabling (without pit-1)&Washing (1) - 2 lines

MEMU CAR SHED KGP:

- Inspection (With pit) - 2 lines
- Stabling - 3 lines
- Washing - 1 line
- Heavy lifting bay - 1 line
    - Two nos. Inspection (with Pit for 12-car MEMU) & one washing lineline is under construction.

6.0 Staff Position including KGP & PKU shed:

Category	Sanctioned	Actual in TPKR shed & PKU shed	Actual in MEMU shed, KGP	Vacancy
Officers	3	2 (Sr.DEE/TPKR shed, ADEE/TPKR)	1 (ADEE/KGP shed)	Nil
Maintenance: i) Supervisor ii) Staff	 75 642	 39 416	 21 150	 15 76
Ministerial & others	13 4	10 2	2 -	1 2
Drawing & Lab	08	05	-	03
Running: i) Supervisor/ Instructor ii) Motorman / LP (S)/ ELP(G)	 33 254	 19 189	 - -	 14 65

7.0 MAINTENANCE, OPERATION & TRAINING ACTIVITY :

- EMU Carshed Tikiapara is devoted to **maintenance**, **operation** and **training** of AC EMU/MEMU rakes.
- EMU trip shed Panskura (Inaugurated on 03.04.1997) & MEMU carshed Kharagpur (Inaugurated on 05.10.1997) are working under control of EMU car shed Tikiapara wherein maintenance of EMU & MEMU is being carried out respectively.
- There is one Training Centre at TPKR which provides initial and refresher training not only to the LPs of KGP division but also to the LP's of ADA, CKP, BLS & Raipur Division. Technical training has also been introduced for maintenance staff for their skill enhancement.

8.0 UTILIZATION OF EMU/MEMU:

Year	Rake KM / Day (Avg.)	
	EMU	MEMU
2018-19	512	505
2019-20	507	506
2020-21	455	389
2021-22	366	372
2022-23 (as on date)	516	429

9.0 SERVICES OFFERED:

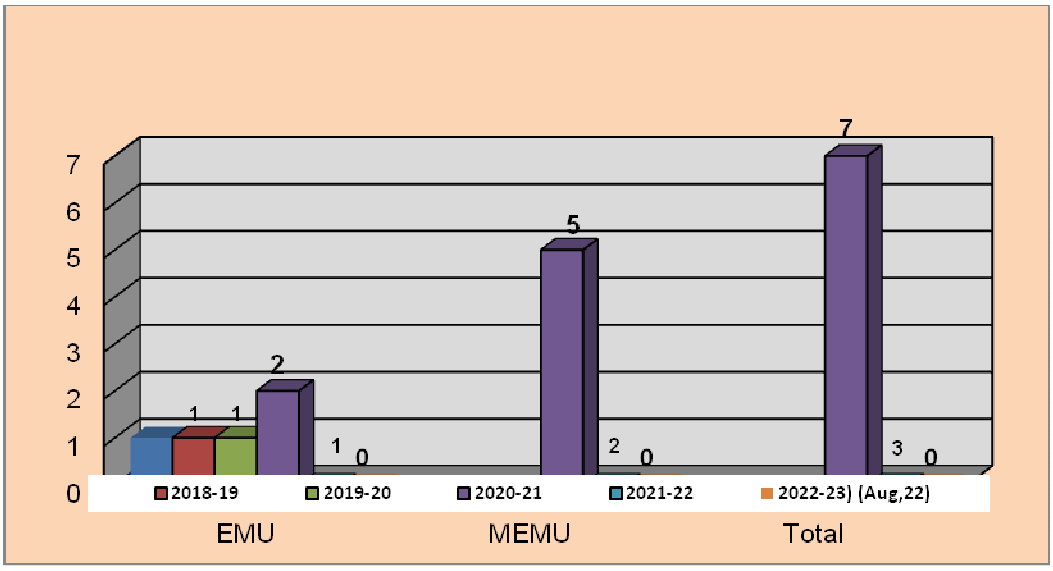
Total Trains services offered for run on daily basis:

Year	EMU	MEMU	Total Trains
2018-19	194	105	299
2019-20	196	121	317
2020-21	146	42	188
2021-22	146	74	220
2022-23 (as on date)	166	129	295

10.0 PERFORMANCE:

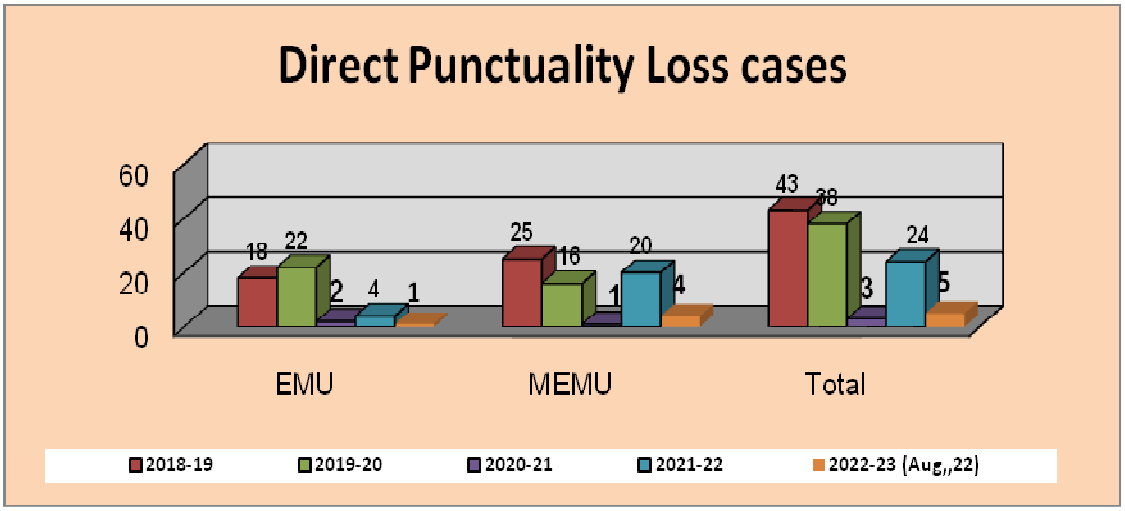
10.1 EMU/MEMU Failures:

Failure on line					
	EMU	MEMU	Total	Total Train Services	% of failure viz a viz total trains ran
2018-19	2	3	5	101127	0.005%
2019-20	2	5	7	100140	0.007%
2020-21	Nil	Nil	Nil	21971	Nil
2021-22	1	2	3	42879	0.007%
2022-23 (August'22)	Nil	Nil	Nil	37227	Nil
Target for 2022-23	2	4	6		



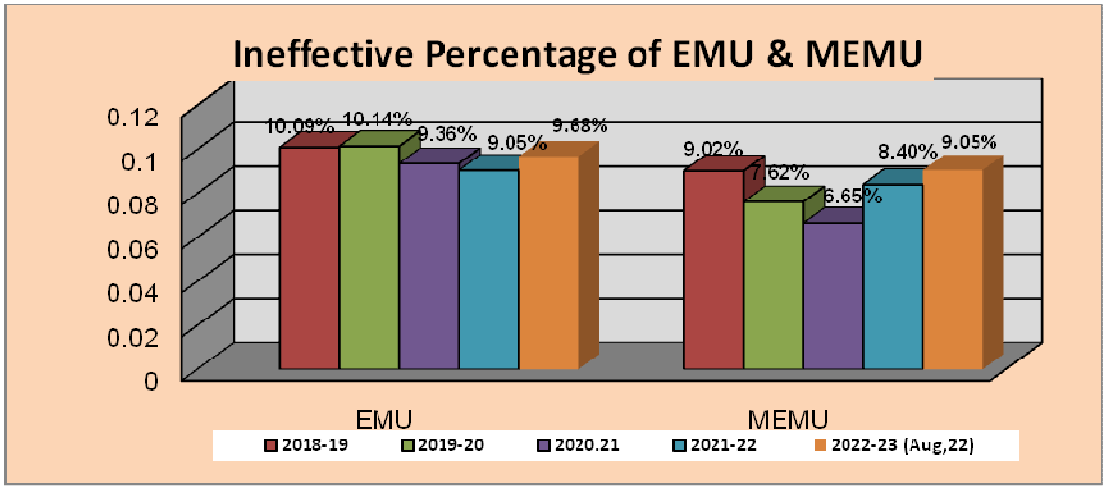
10.2 Direct Punctuality Loss Cases on EMU/MEMU Account:

Total Punctuality Loss Cases					
	EMU	MEMU	Total	Total Trains Ran	% loss of punctuality viz a viz total trains run
2018-19	18	25	43	101127	0.043%
2019-20	22	16	38	100140	0.036%
2020-21	2	1	3	21971	0.013%
2021-22	04	20	24	42879	0.056%
2022-23(Aug,22)	01	04	05	37227	0.013%
Target for 2022-23	15	15	30		



10.3 INEFFECTIVENESS:

	EMU	MEMU
2018-19	9.19%	11.29%
2019-20	10.14%	7.62%
2020-21	9.36%	6.65.%
2021-22	9.05%	8.4%
2022-23(Aug,22)	9.68%	9.05%
Target for 2022-23	**11.5%**	**11.5%**



11.0 Running room status:

Three running rooms for Motormen & guard are being maintained by Sr.DEE/TRS/TPKR i.e. TPKR (18 beds), MCA (14 beds) & PKU (18 beds). Management & maintenance of all these running rooms have been entrusted to outside agency under the supervision of CLI/TPKR & Crew Controller (RR). Provision of subsidized meal is available for the occupant of these running rooms. Facilities like aqua guard, geyser, water cooler, insect catchers, AT supply, etc. have also been provided in these running rooms. To provide adequate rest of m/man & guard of suburban services, air conditioning has been provided at TPKR, MCA & PKU running room. One trainee motorman rest room inaugurated on 08.02.19.

12.0 Crew Lobbies:

There are two crew lobbies one each at HWH station and TPKR car shed. HWH Crew Lobby is under Sr.DOM and TPKR Lobby is under Sr DEE/TRS/TPKR. Fuel sensor based Breath Analyzers are available at both the places. Breath Analyzer test of M/man at TPKR crew lobby is being carried out.

13.0 Training facilities:

Training centre, consisting of two class rooms at TPKR car shed has been reconstructed. Initial training and refreshers courses on EMU/MEMU operation are being imparted to motormen, guard, ELP (S) & running supervisors from SER, SECR and ECOR. Training on maintenance aspect of EMU/MEMU is also being imparted from time to time. Selection for the post of an instructor is under progress. There are two rest rooms for the trainees one is 12 bedded & another is 26 bedded (including two beds for ladies).

14.0 HIGHLIGHTS & ACHIEVEMENTS:

- **INTRODUCTION OF 3-PHASE MEMU RAKES (M/s BEML):**

6 nos. 3-Ph MEMU of M/s BEML make have been allotted to SER vide Rly. Board letter no. 2017/RS(PF&EC)-142/Coaches/BEML/1 dated 13.01.2021. All these rakes have been commissioned and put into passenger service. These rakes are fitted with M/s BT make propulsion system. This is the first time 3-phase MEMUs have been put into passenger service of SER.





- **INTRODUCTION OF 3-Phase AC EMU RAKES:**

  New 3-Phase AC EMU rakes with IGBT based propulsion system has been introduced in suburban service of SER on 22.03.2018. So far total 16 nos. of 3-Phase AC EMU rakes (12-car) had been received from ICF and is in service after successful commissioning.



- **INTRODUCTION OF CONICAL SPRING IN PRIMARY SUSPENSION OF EMU RAKES:**

  Two nos. new 3-Phase AC EMU rake fitted with conical spring in primary suspension have been introduced in SER suburban services for the first time.

- **ENERGY SAVING DUE TO REGENERATION IN 3-PHASE AC EMU RAKES:**

  In these new 3-phase AC EMU rakes regeneration is possible during braking mode. It is found that almost 40% energy saving occurs due to regeneration.

- **INSTALLATION OF TRANSFORMER OIL FILTRATION PLANT.**

New Transformer Oil Filtration plant has been commissioned at EMU car shed, Tikiapara in month of April'2021.





- **INTRODUCTION OF AIR SUSPENSION MEMU RAKES:**

  New MEMU rakes with Air Spring in secondary Suspension have been introduced in SER on 11.04.2018.

- **Conversion of 9-car EMU rake to 12-car EMU rake:**

  To improve customer satisfaction and increase passenger carrying capacity, EMU Car shed Tikiapara has completed conversion of all of its 9-car rakes into 12-car rakes. Presently total 31 nos. of 12-car EMU rakes are put into service. Thus EMU service of S.E. Railway is now **12-car rake only service**.

- **Replacement of conventional lights with LED lights:**

  To conserve electrical energy all the lights of EMU carshed, Tikiapara have been replaced with Energy efficient LED lights.



- **Celebration Of Golden Jubilee Years Of EMU Car Shed Tikiapara:**

  EMU suburban services of S.E.Railway and EMU car shed Tikipara has completed its **fifty glorious years** on 1st May'2018 (**Golden Jubilee Year).** On this great occasion, Golden Jubilee Celebration Programme was organized at EMU car shed Tikiapara on 24.11.18.









- **Golden Jubilee Garden:**

  Garden of EMU Car shed Tikiapara was in desolate condition. The garden has been renovated,several beautification works done including a water fountain in the middle and inaugurated on 24.11.2018 in presence of Hon'ble GM/SER.





- **<u>Golden Jubilee Gate:</u>** On the eve of Golden Jubilee Celebration, one decorated Golden Jubilee Gate has been installed in front of the approach road to EMU Car shed Tikiapara. Similarly entrance of EMU Car shed Tikiapara also provided with illuminated name plate.





- **<u>Provision of purified drinking water</u>:**
Provision of purified drinking water for shed staff has been made with the installation of two nos. Reverse Osmosis (RO) Water Treatment Plant in front of Staff canteen & E3 section.





15.0 <u>ASSISTANCE REQUIRED</u>:

- Present combined vacancy of Technical Supervisors at EMU car shed Tikiapara & MEMU car shed, KGP is **15** and staff is **76.** Day to day working of EMU car shed Tikiapara & MEMU car shed, KGP is getting severely hampered with this dwindling number of supervisors & staff. Further more a number of DEMU services are being replaced with MEMU services. Suitable technical supervisors & staff may be posted at EMU car shed Tikiapara urgently to cope up with the situation.

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