

I. Brief History



1. Year of Establishment: 1986

2. Road No./Type of the first loco homed in Shed: WDM1

3. Details of any heritage Locos in Shed on pedestal or otherwise: NIL

4. ISO Certification: Nil

5. Present Electric loco Holding: 187 Electric Locomotive, Type – WAG7

6. Others Rolling Stock: DEMU DPC (1400 HP) - 08 Nos. & DIESEL SPIC AC - 01 No.

7. Present Coaching Loco Link & DEMU Service: Coaching Link: Nil, DEMU Service: TATA-BMPR (08129/08130) in CKP division.

8. Homing Capacity: 100 locomotives.

9. Augmentation Plans:

(i) Phase-I work of "Homing of electric locos at DLS/KGP" commenced in the year 2019. Year of Sanction: 2018-19; Cost: Rs.15.96 Crore.

(ii) Phase-II work of "Strengthening of Infrastructure at DLS/KGP" is under progress. Year of Sanction: 2019-20; Cost: Rs.4.73 Crore.

10. Other History :

- Old steam shed converted to diesel loco shed: 01-09-1986
- Initial homing capacity: 60 diesel loco in 1987
- Homing capacity increased to 100 in 1995
- Holding of diesel locomotives was maximum in the year 2016 [127 Nos.]
- DEMU Service introduced in the year 2003 [TMZ-TAKI].
- Electric locomotive was introduced in the Shed with a holding of 05 Nos. WAG-5 locomotives.
- Diesel locomotives of the shed have been completely evacuated w.e.f. 01-09-20.

II. Vital Statistics

1	Sanctioned Strength:	699
2	On Roll Strength:	609
3	Officers:	Sr.DME/TRS, ADEE-1/TRS, ADEE-2/TRS
4	No. of Supervisors:	60
5	Total Area:	85,840 sq.mts. (Approx.)
6	Covered Area:	15,500 sq.mts. (Approx.)
7	Track Length	10.7 km (Approx.)
7	%age of Staff housed in Railway Quarters:	37.44% (excluding ministerial staff)

8	Educational Profile of Staff:	Upto 8 th	>8 th	10 th Pass	10-12 th	ITI+Diploma	Graduate
		3.94%	0.99%	11.49%	10.01%	47.13%	26.44%

9	Age Profile of Staff:	<30 yrs	30-40	41-50	51-55	56-60
		10.51%	16.75%	15.44%	33.65%	23.65%

III. Performance parameter (2023-24 up to Dec)

- FRPCPM (Loco A/c) : 3.72
- FRPCPM (Total) : 7.89
- Ineffective (Hourly)/100 : 9.59
- Ineffective (Statistical)/100 : 7.17

IV (A). **Important innovation:** Following/ gadgets/test stand were designed and developed in-house at different section to facilitated smooth maintenance of electric locomotive.

1. OHE Indicating Device: OHE indicator, developed with in-house loco released material to indicate the Presence/Absence of OHE Power in the maintenance pits has been provided in all the maintenance Pits.

The unit runs on 230V AC supply from electric line and converts to working voltage of the system. The presence, absence or system failure of the equipment is indicated through different LEDs as per the following norms:

25kV power presence : Red LED only glows.

25kV power absence : Green LED only glows.

Sensor defective : Yellow LED only glows.



2. Earth fault indicator for traction motor during Light Run Test: A device has been made with inhouse resources that alerts by audio-visual signal in case of any current leakage between conducting material and the body. With the help of this device overhauled traction motors can be tested for any current leakage during LRT and thus line failure due to earth fault can be avoided during service.



3. A C118 Contactor testing unit has been developed with in-house resources to test the contactors after overhauling.



4. Timer for Electromagnetic Contactor enduring testing gadget has been made with in-house resources. The gadget makes and breaks the circuit at 1 second interval with the help of a timer relay.



5. Aux.Compressor (CPA) test stand: A test stand has been developed with in-house resources to test baby compressor after overhauling for any unusual sound, oil leakage as well as the discharge capacity of the baby compressor



6. Compressor Test Stand: This test stand has been made with in-house resources by modifying the earlier diesel compressor test stand. The overhauled compressor can be tested before its fitment in locomotive.



7. A light run test plant for checking the performance of overhauled auxiliary motors has been developed with in-house resources



8. MPH Test Stand: This test stand has been made with in-house resources for testing of overhauled MPH (transformer oil circulation pump with in-built motor) before its fitment



9. Pantograph test stand: A test stand has been developed with in-house resources to test the static balancing, transverse displacement of the Pantograph. The swivel angle of the pant pan, and the overhauling work can be done in this test stand.



10. Soak Test Plant for NC4 Electrovalve:- Shed has developed the plant with in-house resources, in which set of 18 Nos. NC4 valves can be checked at a time under load continuously for 48 hours with rated Voltage of 110 VDC supplied to each NC4 valve. Temperature rise and coil resistance values also monitored.



11. VCD Test Bench: A VCD Test Bench has been developed with in-house resources for testing the Main Control Unit, Cab Unit & QVCD relay of different make i.e. ICE, Saitronix & Medha of the VCD before fitment in locomotive. The test bench has the facility to save data of different input signal in soft mode also.

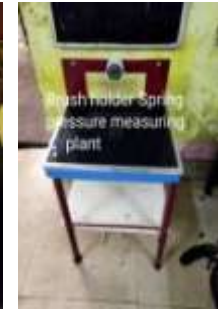


12. Test Bench for combined testing of VCB Pressure Regulator & Pressure Switch: A test bench has been developed in-house to check and adjust the output pressure of pressure regulator to the prescribed pressure of different make VCBs with input air pressure of 9.5 kg/cm². The cut-in cut-out pressure of the pressure switch can also be checked and adjusted by this test bench.



13. Gadget & Fixture for checking pressure on Traction motor carbon brush:

A fixture included with a digital weighing machine has been developed in-house to check the spring pressure on carbon brushes with accuracy during overhauling the brush holders at bench. Pressure may be adjusted in between standard range (2.82 Kg to 3.44 Kg) as per requirement. This will help to restrict the excessive wear of carbon brushes and improve the reliability of the traction motor and locomotive in turn.



14. Suction arrangement for dust removal:- Another dust extractor has been made with in-house resources. The canvas bellow can be attached to one of the doors and dust released during the blow out process in schedule maintenance gets eradicated by suction and expelled out.



IV (B). Important Modifications

1. MFDCS Modification: The microprocessor based fault diagnostic and control system (MFDCS) is a real time monitoring and data logging of loco parameters & remote fault monitoring system. 10 Nos. WAG7 electric locomotives have been converted into MFDCS from relay based by KGPE Shed, Kharagpur. At present 137 Nos. MFDCS based locomotives are in the holding of KGPE.



2. Tool Box: Tool Box has been provided in all WAG7 electric locomotives of ELS/KGP to store tools/equipment in locomotive to eliminate Line Boxes of Loco pilots.



3. RS Cock Modification: RS valve/Emergency valve (Cock) relocated in all locos for ALPs convenience as they find it difficult to put their hand over RS 'Valve handle' by bending down and to see continuously the signal.



4. TMDDS: Traction motor Dropping Detection System (TMDDS) in Conventional Locomotives equipped with Hitachi HS 15250A Traction motors – provided in 09 Nos. WAG7 electric locomotive of KGPE.
5. RTIS: Real time train information system monitors and sends continuous information of geographical location of locomotive to a central server through satellite – provided in 146 Nos. WAG7 electric locomotives of KGPE.



6. Shunting Mode Operation: Auto regression circuit in tap-changer based conventional electric locomotive for ensuring shunting mode operation. A total of 14 Nos. locomotives have been provided with this modification that helps to restrict the loco speed within 15 KMPH during shunting operations.