

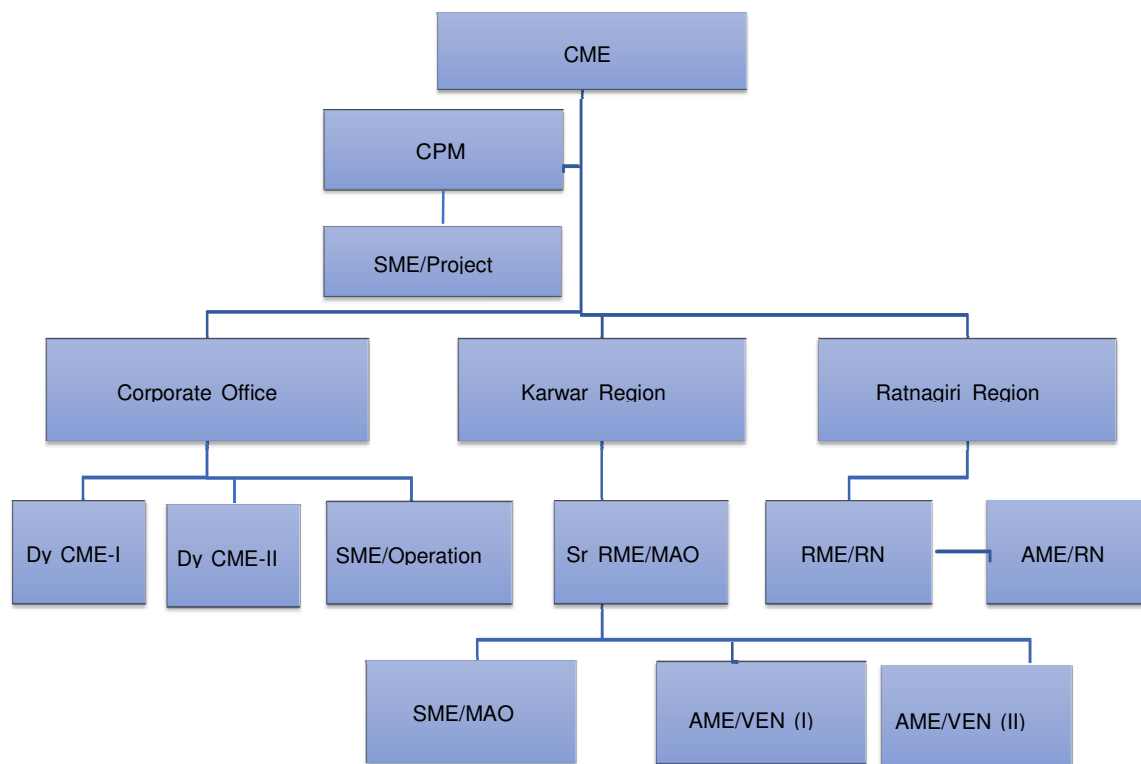
## OVERVIEW OF MECHANICAL DEPARTMENT



Mechanical Department plays a vital role in the organization by providing its support to both train operations and project division.

The department is headed by Chief Mechanical Engineer, who reports to Director (Operations & Commercial). He is supported with officers and staff at Corporate Office, Ratnagiri and Karwar regions for both Open Line and Project Wing

The organization structure for Rolling Stock Operation & Maintenance (Open Line) and Project Wing is as below.



**The Key Performance Areas (KPA) of Mechanical Department are following**

### **A: Rolling Stock Operation & Maintenance**

- Train Operations including locomotive operation, crew management & training and management of RCDs
- Passenger Rake Maintenance (Including Primary, Secondary and IOH)
- Freight Train Examination and Maintenance
- Conversion/Fabrication and Maintenance of Roll-On Roll-Off Rakes
- Maintenance and Operation of Track Machines and Rail Mobile Vehicles (RMV)
- Maintenance of Tower Wagons (DETC)
- Maintenance and Operation of MEMU Coaches
- Maintenance and Operation of Rescue Trains (ART/SPARMVs/140T Crane) and disaster management
- Training of Running and Non Running Staff including Electrical Conversion Training
- Coordination for Environment & Housekeeping Management

### **B: Project Wing**

- Construction of Rolling Stock Component Factory for Indian Railways
- Development and Promotion of Automatic Coach Washing Plant (ACWP) and Automatic Train Examination System (ATES)
- Mechanical department was Involved in other multi department projects like Anti Collision Device (ACD), NTPC Projects

- Project Execution and New Business Development in Rolling Stock O&M and Infrastructure Projects including International Projects
- Export of DEMU trainsets to Nepal and Operationalization of Nepal Railway

The summary of activities of O&M wing is given in the location activity map

### **Rolling Stock O&M Wing :**

There are 394 (30.08.23) employees in the Non-Running (C&W) cadre and 445 employees in the Running cadre. Various types of Rolling stock maintained by the department is tabulated below.

RA	OBS CAR	LW FC WAC	LW AC CW	LWA CCN	LW C BAC	LW SCN	LW LR RM	LWS	L SLRD	LD SLR	MEM U	LWAC CNE					TOTAL
2	1	4	4	14	4	36	8	82	4	7	24	12					202
140T CRA NE	BOB YN	CSM	UNIM AT	BC M	DT S	BR M	UT V	RM V	ART Coa c h	AR M V Coa c h	MEM U (Rak e)	RORO (Wag ons)	PBR	Locomotive			
01	40	03	02	01	01	01	02	10	04	06	03	328	01	03			

There are two regions in Konkan Railway with regional headquarters at Ratnagiri and Karwar. The brief description of organization and activities undertaken by Mechanical Department in the two regions are given below

**A ; RATNAGIRI REGION :** Mechanical department of Ratnagiri region is managed by one Regional Mechanical Engineer (Sr Scale Executive) and one Assistant Mechanical Engineer (Jr Scale Executive)

#### **1. ACTIVITY CENTRES.**

**ROHA:-** There is a Running Room managed by Central Railway which is used by the crew of KRCL and Central Railway.

**KOLAD:-** Kolad is loading point for RO-RO wagons. Supervision of truck loading from safety point of view, checking of lashing arrangement and continuity check is done by C&W staff for which one Supervisor (round the clock on demand) and 5 Artisans are posted. Also looking after the maintenance activities of Electronic In Motion Weigh Bridge (EIMWB)

**CHIPLUN:** At Chiplun, two Supervisors, 22 Artisans and 7 Khalasis are posted. Major activities in Chiplun are:-

- a. Fuelling of freight train locos and Train number 11004 / 11003 & holiday specials passenger train locos (approximately 5-6 locos per day), track machines and RMVs.

There is an RCD (Fuelling Installation) consisting of two large storage tanks of 656KL each with a daily fuel issue of about 10KL

- b. Maintenance of Two Rail Maintenance Vehicles (RMVs).
- c. Operation and Maintenance of CSM 954 track tamping machine
- d. Operation and Maintenance of PBR41 machine.
- e. Maintenance of Tower Wagons (DETC)
- f. Minor attention to any rolling stock (Carriage/wagon/loco) unusual enroute

**RATNAGIRI:**-There are 11 Supervisors, 27 MCM/Artisans and 16 Khalasis posted at Ratnagiri. A 24 coach pitline with integrated maintenance of both conventional/LHB coaches and MEMU is proposed). There is also a Carriage & Wagon Maintenance Shed. There is a crew lobby for booking/ management for 157 running staff with an average booking of 90-100 running staff per day. There is a running room with 64 beds (64 bed running room for running staff of both Konkan and Central Railway).

Major activities are:-

- a. Rolling In examination of through mail / express train and attention to any coaching unusual including site for Automatic Train Examination System(ATES)
- b. Operation and Maintenance of Track Machines including UNIMAT 8271 and UTV
- c. Maintenance of Four RMVs.
- d. Maintenance of Tower Wagons
- e. Also looking after the maintenance activities of Electronic In Motion Weigh Bridge (EIMWB)
- f. Maintenance of Accident Relief Medical Van and restoration and re-railment work in the event of an accident.
- g. Average Booking of 90-100 Running staff daily from Crew Lobby
- h. Providing Rest facilities to running staff of Verna and Central Railway. There is also one small running room at Swanatwadi of 6 bed capacity.

**B KARWAR REGION:** There is one Sr. RME who is overall in charge of the region with One SME posted at Madgaon and Two AME posted at Verna.

### **ACTIVITY CENTERS.**

**THOKUR:**- At Thokur there is a small Wagon Depot to service the HPCL siding. It carries out RBPC , intensive and safe to run examination of Petroleum wagons. It also services Ro-Ro loading/unloading at Suratkal. There are 6 Supervisors, 23 MCM/ Artisans and 1 Khalasi posted at Thokur.

**SURATKAL:**- At Suratkal there is a running room with 23 beds and presently 18-19 running staff are using it daily. Suratkal is also headquarter for 19 running staff which are primarily utilized for running BOBRN services for Udupi Power House.

**MADGAON:** Sr RME of Karwar region has his office at Coach Care Centre, Madgaon.

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**Coaching Depot** : There are two pit lines- one with 24 coach length and one with 22 coach length along with one Automatic Coach Washing Plant. There is also an IOH shed with coach holding capacity with modern design without EOT. This IOH shed is used for carrying out IOH schedules of coaches and for coaches requiring major repairs including lifting. There are 175 LHB coaches, 24 MEMU and 03 RA/Observation car, a total 202 coaches based at this depot. This depot is manned by 17 Supervisors, 86 MCM/Artisans and 19 Khalasis. The activities are:

1. Primary maintenance of Mandovi /Konkan Kanya (20111/20112/10104/10103), Madgaon- Sawantwadi-Diwa Passenger (50108/50107), Ratnagiri - Diva Passenger (50102/50103), Madgaon-Mangalore MEMU (10107/10108) and Madgaon-Karwar (70101/70102) MEMU rakes is carried out at Madgaon. Average 814 rakes per year of Primary maintenance is carried out on two pitlines at Madgaon.
2. Secondary maintenance of Madgaon-Nizamuddin Rajdhani 22413-22414 (bi-weekly), Goa Sampark Kranti 22449-22450 (bi-weekly) and Madgaon- Ernakulam 10215-10216 (weekly) Average 264 rakes per year of Secondary Maintenance is carried out on two pitlines at Madgaon.
3. Maintenance of many other Winter/Summer/Holiday/FTR Specials is carried out at Madgaon. Maintenance of average 36 rakes per year of Winter/Summer/Holiday/FTR special Rakes is carried out at Madgaon.
4. Rolling In of all mail/express/passenger trains and any unusual / minor repairs at platform or enroute. Average 12412 rakes per year are being carried out with Rolling IN/OUT examination of all mail/express/passenger enroute/terminating trains.
5. Attention of enroute failures, Passenger complaints through Rail Madad etc. are attended by Madgaon Station Staff. Also escorting of trains, for various failures, etc is being done by this depot.
6. One External Notification System (ENS) which is connected with the Automated Train Examination System (ATES) of Verna is installed at Madgaon.
7. In addition, Madgaon also caters to other end attention to prestigious trains like Tejas Express, CSMT-MAO Janshatabdi Express, LTT-MAO Double Decker Express and MAQ- MAO Intercity Express.
8. SS1 schedule of LHB coaches, IOH of ICF coaches and attention of major sick coaches is done in IOH shed.
9. RCD Madgaon has the largest RCD on KRCL which has storage facilities of 2 Tanks of 355 KL each and daily issue of approximately 17KL.
10. Crew Lobby & Running room: 137 no. of mail/express/passenger crew are headquartered at Madgaon. There is 27 bed Running room to cater to mail/express Running staff of Ratnagiri region and S.W. Railway. There is one more resting facility for running staff with 6 beds created at Karwar station.

**VERNA:** This is major activity centre for the Mechanical dept. It has Loco, Wagon & MEMU Maintenance facilities. There are 16 Supervisors, 94 MCM/Artisans and 27 Khalasis headquartered at Verna. The major activities at Verna are:-

1. Maintenance of Accident Relief Train including 140T Break Down Crane and Rescue, restoration and re-railment work in the event of an accident.
2. Maintenance of Accident Relief Medical Van.
3. Maintenance of 03 sets of MEMU rakes.
4. Intensive examination of all types of freight trains and repair to all types of Wagons.
5. Maintenance and operation of CSM-946, CSM-947, UNIMAT, BCM,DGS,UTV
6. Maintenance of 4 Rail Maintenance Vehicle (RMVs).
7. Maintenance of Tower Wagons (DETC)
8. Maintenance of Two EIMWB used for weighing of container load originating from MLPB, VEN and other loads at VEN
9. Maintenance of M&P of Mechanical department
10. Operation and maintenance of Automated train examination system
11. Minor repair of en-route locomotives
12. Maintenance of one VEN based locomotive WDS6 no:36253
13. There is a small Running room of 12 beds which is used by running staff of Ratnagiri, occupancy was 9 to 12 per Day. There is also a crew Lobby in which 05 Crew Managers manages 121 running staff(LP/ALP)
14. There is an RCD having 03 tanks out of which 02 tanks having capacity of 70KL & one tank having capacity of 336 KL. The daily approximate issue is 25KL

The key statistics and other information are as follows.

**Project Wing: The** department has provided important contributions on various projects of the Corporation right from construction phase. So far, the main projects undertaken by the department during operations phase have been

1. Mechanical department has undergoes for Development, manufacturing and promotion of Automatic Coach Washing Plant for Indian Railways
2. Mechanical department handled development of braking interface for Anti-Collision Device (ACD) for rolling stock and ACD project execution in NF Railway and Konkan Railway
3. Assisting nodal departments in execution of multi department projects like NTPC sidings, MRPL etc.

The department has now taken major steps to go in a big way for project execution and business development in rolling stock infrastructure, technology and operation and maintenance projects to become a profit centre. Some major initiatives are

1. Mechanical department is presently setting up Rolling Stock Component Factory in MIDC/Lote (Ratnagiri District) for Central Railway. Cost of the project is Rs 402 Cr. The factory shall handle overhauling of approximately 3600 LHB bogies and

manufactured of 1200 new bogies.

2. Rolling Stock Wayside condition monitoring technologies for Smart Yards like ATES
3. Rolling Stock Operation & Maintenance projects

Mechanical Department is also undertaking International Projects and Business Development Activities. Two DEMU train sets have recently been exported to Nepal and work for operationalization of Jaynagar-Kurtha line of Nepal Railway has also been awarded to KRCL.

A team of KRCL officials visited Tata Chemicals Magadi Limited(TCML) Kenya, for Inspection & Meeting with TCML regarding Consultancy project on Rehabilitation of Railway system at TCML,Kenya.

Department is pursuing international business in the area of rolling stock and components export and operation & maintenance of railways and rolling stock.

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