

## **Traction Distribution Management System (TDMS)**

As a part of Asset Management, Inspection, Maintenance, capturing the life cycle of Traction Assets and fully automation of Traction Distribution Management functions of the Indian Railways with advance business intelligence and analytics capabilities, Railway Board intends to design, develop and implement a Traction Distribution Management System (TDMS) to cater the need of Supervisors of OHE (Over Head Equipment) Maintenance Depot, PSI Maintenance Depot, remote control center as well as managers and their officers at Division / Zonal headquarters and Railway Board Level. The overall scope of the proposed pilot project of TDMS pertaining to Asset Maintenance includes development and implementation of functional modules as well as maintenance/operation of the proposed system. The system has to be implemented in one zone (Northern Railway) initially in Phase-I, later on it will be implemented in remaining Zones/Divisions of Indian Railways in Phase-II.

### **OBJECTIVES.**

1. Capturing Asset Master Details of Mast/Portal Module, Turnout/X-over, ATD/ Regulating Equipment, IOH/POH (Cantilever Assembly), PTFE, Section Insulator, Power Block/ Traffic Block, Foot Patrol, OHE Failure and punctuality, Over line Structure, HT Crossing.
2. Records Inspection Details of Mast/Portal Module, Turnout/X-over, ATD/ Regulating Equipment, IOH/POH (Cantilever Assembly), PTFE, Section Insulator, Power Block/ Traffic Block, Foot Patrol, OHE Failure and punctuality, Over line Structure, HT Crossing.
3. Inspection Planning, Exception Generation and Compliances based on threshold values of assets parameters will be generated.
4. Generate various MIS and statistical Reports of Mast/Portal Module, Turnout/X-over, ATD/ Regulating Equipment, IOH/POH (Cantilever Assembly), PTFE, Section Insulator, Power Block/ Traffic Block, Foot Patrol, OHE Failure and punctuality, Over line Structure, HT Crossing.
5. Enabling customized and role based access of reports.

### **ACHEIVMENTS-**

1. Master Modules of TDMS is test bed implemented for all Divisions of Northern Railway on 23.11.2017.

### **BENEFIT DERIVED-**

1. Digitization of Traction Assets and its maintenance records Improves data collection mechanism eliminates data entry errors with reduced paper work and optimal utilization of staff.
2. Staffs needs not to carry registers for reporting and fetching data. All Reports are available to each hierarchal level through Internet along with Retrieval & Historical pattern of Data of any numbers of years.
3. Need Based Deployment of Resources and Machine (Tower Wagon etc.) results in optimum resource utilization and Proactive traction maintenance leading to reduced traction Assets health related accidents.
4. No Time lag between data gathering and analysis there off ensures timely receipt of data from external entities.
5. Standardized formats for data capture at centralized location of CRIS for all the Divisions/Zones.
6. Automate validation and verification of data improves quality of Inspection.
7. Provisions for data entry directly by units/in charges, which will help obviate frequent information delays.
8. Defects do not get lost till attended and Prioritization of Works based on inspection results.
9. Forecasting of Asset life based on codal life and inspection results.
10. Facility to generate Ad hoc-queries and customized/parameter-driven reports for better decision making on account of data analysis at different levels of hierarchy. Intelligent Actionable Reports available Anytime Anywhere through internet.

### **INTEGRATION -**

1. EEMS for Sub Station Master Data
2. TMS for Railways Track Network Master data

### **WAY FORWARD-**

The proposal for TDMS (Rollout) for PAN India along with Estimate has been sent to Railway Board for inclusion in work proposal.