



RAILWAY ELECTRIFICATION

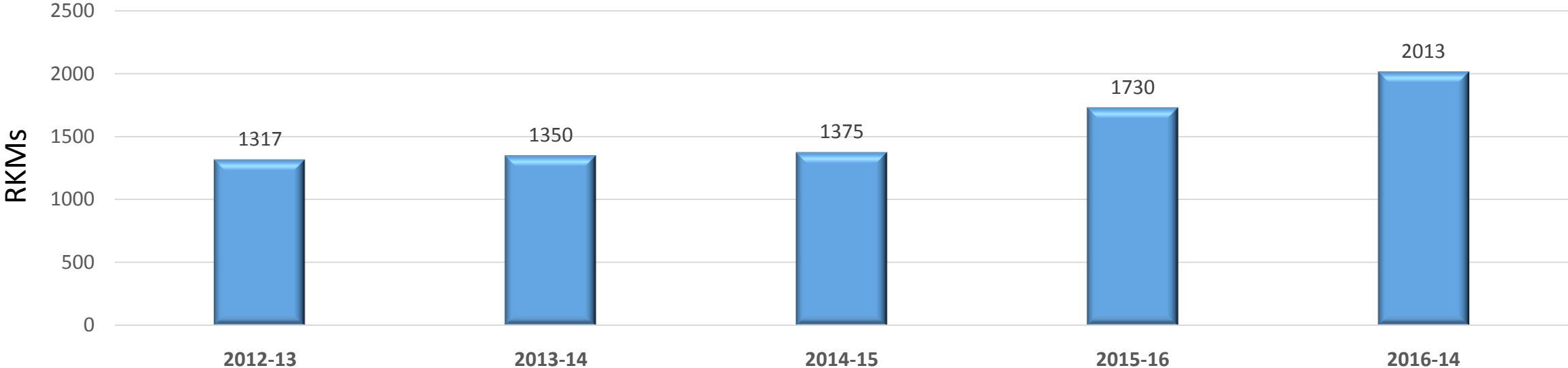
28th october 2018

Railway Electrification at a Glance

Current Status :

- Length of Indian Railway Tracks : 66687 RKM
- Electrified Line : 30012 RKM
- Existing Lines to be Electrified : 36675 RKM (Mission 2020)

Railway Electrification Progress – Last 5 Years



Railway Electrification at a Glance

Challenge:

- Existing Lines to be Electrified : 36675 RKM (Mission 2020)
- Annual Electrification Achievement : 1550 RKM (Last 5 Year Average)

Hence, We have to Electrify **12000 RKM/Annum**, Over a period of three years to make the Mission 2020 of 100% Electrification of Indian Railway Network, a success.

HOW?



MECHANISATION in Railway Electrification

KGT



- Auguring

Concrete train



- Concreting

KGT



- Mast erection

VCP



- Access wire installation at final tension

Wiring train



- Final Fitting

VCP





- Self Propelled, Multiutility Vehicle
- Can work on Track as well as Off Track
- Can be used for Auguring, Mast Erection, Tamping etc.
- All Time 04 Wheel Drive
- 360° Cab rotation
- Capable to reach up to 07 meter from Track Axis for any Job.
- Holding Capacity of 4 tons with fully extracted arm.
- Hydraulically Balanced, More Safe to ride and work, No Need of Stabilizers.
- CRAB Drive for max utility of vehicle
- 4,2 meter of turning radius
- Consistent performance
- Quick Hitch System and Rototilt Mechanism



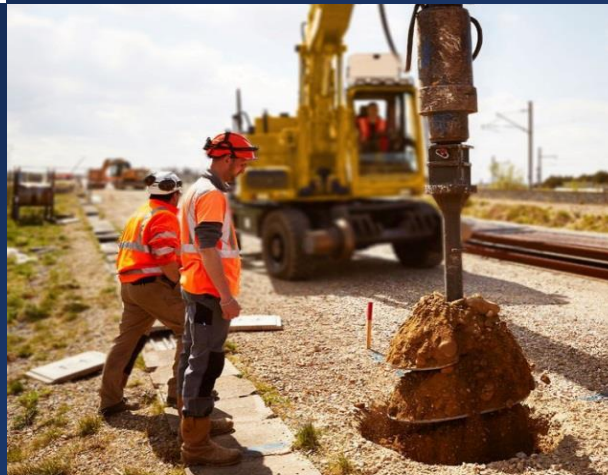
These cranes are not same as civil engineering cranes but chargers are fully designed and dedicated for railway applications, capable to **drill holes 3.5m deep** at a distance **7m** from the track axis.



Able to climb by itself on the rail in any conditions

A Robust, Multiutility solution from GEISMAR

The KGT can ensure the drilling, digging, mast erection works from the embankments or on the rail.



It can hold mast weighing up to **3.5 tons** at **7m** from the track axis.



Hydraulically Balanced, **No Need of Stabilizers** during the operation, hence suitable for working at **any surface conditions**





Video





Current Practice of Installing OHL Accessories

- Labour Intensive – Huge Manpower
- **Unsafe** operations – accident prone
- Limited access to OHL equipment
- Cumbersome Operations
- Less Productive, inconsistent
- Manually operated



- The **VCP** is a light, compact and easily maneuverable equipment with limited noise and pollution levels.
- Able to climb on the track up to 1.10 Meter of height from field side, without any damage to ballast profile.
- Capable of a long-range of work on Track or Off Track.
- 3 people can work simultaneously on the **VCP**, one on the pole and cantilever and 2 on the catenary.
- Hydraulically self balancing vehicle.
No need of additional stabilizers.
- Controlled by remote controls and control panel of vehicle itself.



VCP



GEISMAR's Innovative Solution



Controlled Remotely
by Wireless Control Panel

20Km/h on Track Speed



Stand Alone Unit *Safely
Off Trackable*

Easily Climb on Track
*Ready to work in less
than 01 Minute*



VMT 863 C

OHL worksite motorcar
with elevating and rotating platform

**VMT 750 C-GR**

OHL maintenance motorcar
with removable cradle for 2 persons



VMB 2214 IC

OHL vehicle for catenary inspection and measurement



VMB 2015 C-GR

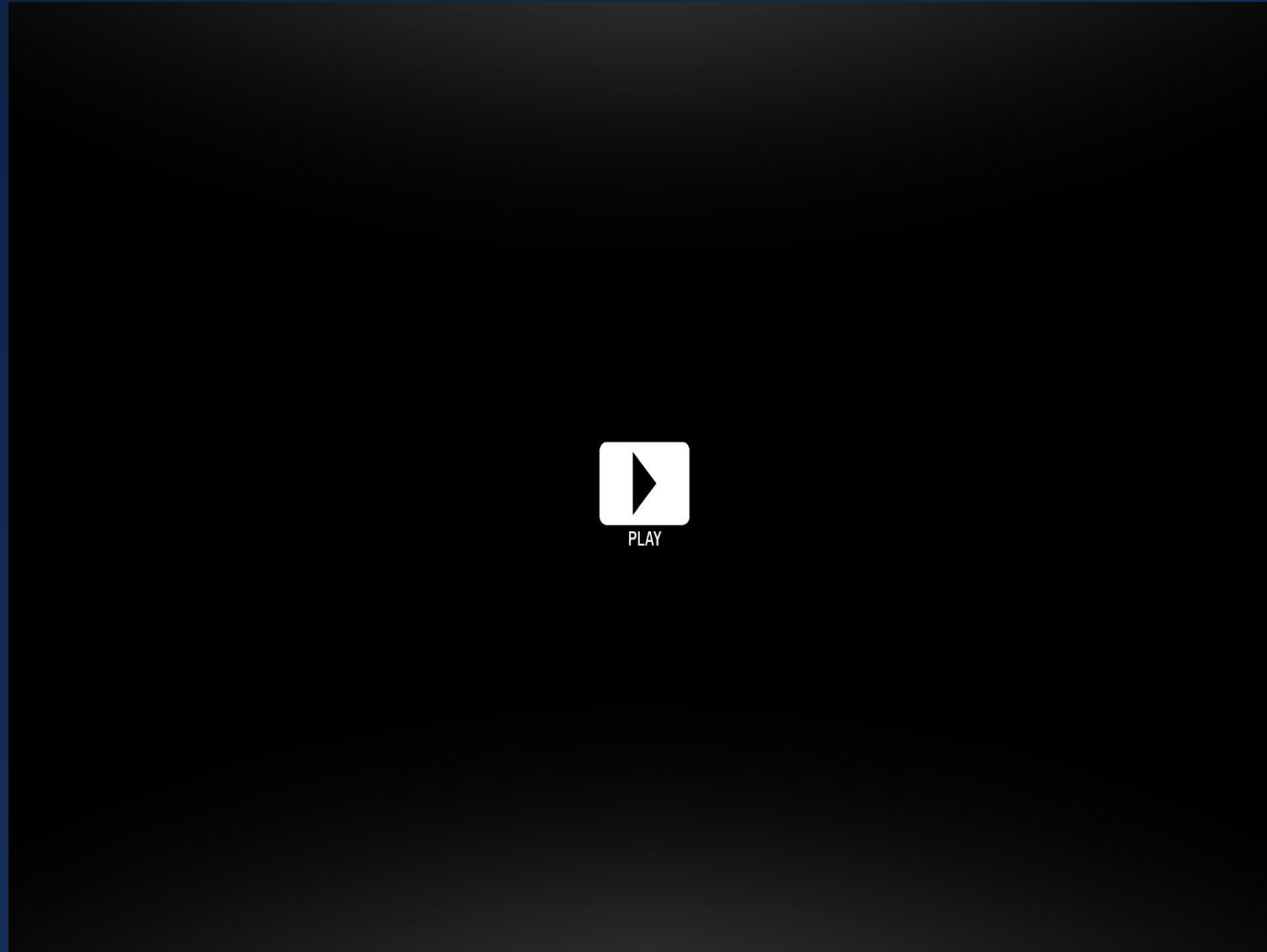
OHL vehicle for catenary maintenance and measurement

To meet the demand of modern networks regarding the speed, safety and economy, GEISMAR group has developed wiring train for mechanised rail electrifications in early 80's



- Self-Contained train formation
- Consists heavy-duty UIC Motorcars, axles or bogie mounted unrolling wagons
- Feature to have 02 – 08 reel stands
- Working Platforms and workshops can also be provided on demand
- Up to 1600 HP embarked power enables a drive up to 120 km/h in perfect conditions
- Reversible option provides the unmatched flexibility to start the electrification from any Direction

Video



GEISMAR – A Leading technology partner of Various Railways and Metros over the globe, providing the modern solutions for:

➤ Over Head Lines:

- Equipment, Vehicles and Machines for New Railway Electrification Projects
- Equipment, Vehicles and Machines for Measuring and Inspection of Existing Lines
- Modular Solutions for OHL Maintenance
- Modern and advanced solutions for OHL Renewal

For 1500 V DC to 25 kV AC...

- Motorcars and rolling/unrolling systems



- Rail road vehicle

- OHL components



Connections, droppers.... Disconnectors. Clamps and fittings....

- Catenary tools



For all pulling, holding, cutting, crimping requirements...

Product families



Track laying & maintenance

The most comprehensive range ...
From hand-held machinery to heavy equipment for track works



OHL laying & maintenance

For 1500 V DC to 25 kV AC...

- Motorcars & rolling/unrolling systems
- Rail-road vehicles
- Catenary tools
- OHL components



Measurement

From traditional devices
to electronic recording systems
for the control of track and OHL



Track tools

A wide range
of hand tools dedicated
to track maintenance



Plants & engineering

Expertise in rail and sleeper plants:
advances design
and high spec. equipment...

Over 50 Agent World Wide

- 14 Overseas Subsidiaries (*Sales & Manufacturing*)
- 15 Foreign based Commercial Desks



GEISMAR – A Leading technology partner of Various Railways and Metros over the globe, providing the modern solutions for:



GMSL multipurpose grinding set



MRT 2 sleeper changing machine



VMT 860 heavy duty track motor cars



PRUL carbide rail drill



LFT 4111 sleeper fixing machine



RGL 600 ballast regulator with hopper



T2002 programmable coacscrewing machine



PEM-LEM turnouts modular substitution system



KGT/V+ MB8A rail-road loader + tamping unit



Tracks:

- Equipment, Machines and Vehicles for New Track Laying/Construction
- Modern Solutions for Track Measuring and Rail Inspection of existing Tracks
- Modern and advanced Equipment for Track Maintenance
- Modular Solutions for Track Renewal Works



Thanks for your attention &
interest

Mr. Sandeep Ghalyan

Sales & Technical

- Cell: +919811140678
- Email: s.ghalyan@geismar.com

Mr. Suresh Mattas

Country Head – India

- Cell: +919910334435
- Email: s.mattas@geismar.com

GEISMAR India Pvt. Ltd.

DSM-248, DLF Towers, Shivaji Marg, Najafgarh Road, Moti Nagar, Delhi – 110015

▪ Telefax: +91 11 47553255 ▪ Email: india@geismar.com