

Detailed scope of works  
and Technical  
Specification

## **25 kV Electrification of Eskisehir – Sincan Section; 281 TKms; TURKEY:-**

IRCON completed the prestigious turnkey Railway Electrification Project of Turkish State Railways (TCDD) for Electrification of Eskisehir - Sincan (281 TKM) between Jan'1989 to Dec'1992. IRCON had the responsibility of Design, Supply, Erection, Testing and Commissioning of complete Railway Electrification system on the section having 19 stations with 25 kV polygonal type, SNCF design based self-regulating Catenary with concrete tubular poles. The Project involved close coordination and interfacing with other designated Contractors of Turkish State Railways on the section. Main features of the Catenary system were:

- Swiveling type Cantilever assemblies with galvanized seamless steel tubes.
- Winch type self regulating equipment
- Portals/Head spans in station areas.
- 65 mm sq. cadmium copper Catenary wire
- 107 mm sq. electrolytic copper Contact wire
- Four nos. 154/25 kV Traction Sub-station
- Sectioning and Sub-sectioning Posts
- Telecommunication Facilities
- SCADA with remote control at Eskisehir



The Project involved erection under severe climatic conditions and erection had to be carried out under sub-zero ambient conditions. Innovative design had to be done for low height eight tunnels on the section. The Project was completed ahead of schedule and to the entire satisfaction of Turkish State Railways.

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## **25 kV Electrification of Sincan – Ankara Section; 67 TKms;**

### **TURKEY:-**

Pleased with the performance of IRCON on the Eskisehir – Sincan Railway Electrification Project, TCDD awarded the prestigious turnkey Railway Electrification Project involving Railway Electrification of Sincan – Ankara high density Suburban section (67 TKM) of Turkish Railway network. The work involved modifications of existing Catenary system on the section and Ankara yard and required very close coordination with TCDD to avoid minimum disruption to the suburban traffic. IRCON completed the work between Dec'1993 to Sept'95 and well ahead of schedule. Design, Supply, Erection, Testing and Commissioning was the responsibility of IRCON. 25 kV polygonal type, SNCF design based self-regulating Catenary with concrete tubular poles was used on the section. Main features of the Catenary system were:



- Swiveling type Cantilever assemblies with Galvanized seamless steel tubes.
- Winch type self regulating equipment
- Portals/Head spans in station areas.
- 65 mm sq. cadmium copper Catenary wire
- 107 mm sq. electrolytic copper Contact wire
- 154/25 kV Traction Sub-station

Thyristor controlled dynamic Power Factor Compensation based on harmonic analysis carried out by IRCON was installed to achieve Power Factor within the stipulated limits, set by Turkish Electric Utilities.