



A company of R&S

**Tesar,
the journey starts
with our power**



Tesar a long story in traction applications

Tesar srl is a worldwide leader in the supply of cast resin transformers mainly used for energization of rails, metros, highspeed trains, tramways, braking energy recovery systems and auxiliary services for stations and signalling.

The range of production includes transformers till 20MVA 52kV for every kind of application since 1979 and operates under ISO 9001 quality management system certification, it is an environmentally friendly company in line with ISO 14001 standards and it performs all activities in compliance with ISO 45001 safety standards.

With more than 30 years of experience in the design and production of transformers for traction systems Tesar can boast a long list of realized projects that includes:

- Metro Oslo
- Metro Milan
- CDGVAL Charles de Gaulle airport Paris
- Metro Barcelona
- Metro Santiago Chile
- Metro Riyadh
- Metro Alger
- Metro Kuala Lumpur
- Metro San Paolo
- Swiss railway
- Metro Mallorca
- Italian railway
- Tramway Casablanca
- Light Rail Train Jakarta
- Metro Quito
- Tramway Hamburg
- Spanish railway
- Tramway Paris



Tesar offers a wide range of customized solutions for feeding rectifiers of all main producers:

- Transformers with phase shifting for the supply of 6, 12 or 24 pulses rectifiers
- Electrostatic screen between primary and secondary
- Configuration for double secondary windings in interleaved (coupling factor > 0.9 or double storey (coupling factor $< 0,2$)
- Network frequency 50Hz , 60Hz , 16 2/3Hz
- Insulation classes F/F or H/H
- Environmental, climatic and fire classes up to E4, C3, F1
- Overloads up to class IXa as per EN 50329-1
- Metallic enclosures for indoor and outdoor installation

Tesar successfully passed short circuit tests and inline tests in CESI and IPH laboratory and achieved the homologation with RFI (Rete Ferroviaria Italiana).

All transformers are designed according to latest revisions of applicable standards:

EN 50329-1
IEC 60146-1-1
IEC 60146-1-2
IEC 62695
IEC 60076

