

## Continuous Casting Technology for CuMg Trolley Wire Rod

- Profile Drawn Contact Wires
- Stranded Messenger & Dropper Wires
- Special High Tensile Conductor Wires



High Speed Rail CRH 3

### Proprietary Continuous Casting Technology

- Graphite Resistance Heated Furnace Design
- Graphite Twin Chamber Crucible
- Temperature Stability
- High Integrity Metallurgical Structure of As-Cast Rod
- Inert Gas Protection
- Integrated Melting, Alloying & Casting
- Full Automatic Monitoring of All Key Production Parameters
- Close Tolerance of Chemical Composition
- Consistent Quality
- Greater Output than Competing Systems
- Safe Operation



RS 3000/5/CuMg Continuous Casting Machine



Casting Dies and Supercooler Assemblies



5 Stand Withdrawal

## Model RS 3000/5/CuMg Machine



Five strands 30mm dia. CuMg Alloy Rod in Production



Coil Formation – 3 Tonnes Capacity

- Compact Arrangement 30m x 3m x 7.5m high
- Floor Mounted, No Special Foundations
- Up to 5 Tonne Coils
- Full Technology Transfer and Customer Training
- Life-long Technical Support for Users
- Proven Technology over Thirty Years (CuMg since 1997)

- Automatic Cathode Feed
- 360 kVA
- Five Strands
- 19-30mm Diameter Rod Production
- Up to 500 Kg per Hour Output
- Complete System



Profiled Contact Wire – Stranded Messenger Wire – Stranded Dropper Wire



Transverse Section 30mm CuMg As-cast Rod



Longitudinal Section 30mm CuMg As-cast Rod

### Materials used for Trolley Wire European Specification EN 50149:2001

Material		Resistivity (Ohmmeter max. 10.08)	Breaking Load 150mm <sup>2</sup> (kN)	Tensile Strength 150mm <sup>2</sup> (minimum N/mm <sup>2</sup> )
Copper-Magnesium Alloy	CuMg 0.2	2.240	61.1	420
	CuMg 0.5	2.778	68.4	470
Copper-Tin Alloy	CuSn 0.2	2.395	61.1	420
Copper-Cadmium Alloy	CuCd 1.0	2.155	64.7	445
Copper-Silver Alloy	CuAg 0.1	1.777	50.9	350
High Conductivity Copper	Cu-ETP	1.777	45.1	310