

TDT copper - GREEN copper | an ISO 9001:2008, ISO 14001:2004 & OHSAS 18001:2007 Certified Company

TDT Copper Ltd.
(formerly Alchemist Metals Limited)





The largest stand-alone and youngest CCCR Plant in India with annual capacity of 79,200 MT. The plant is located at Bawal, Haryana

TDT Copper was set-up, as an 100% Foreign Direct Investment by two multinationals

Taihan Electric Wire Co. Ltd., South Korea

Large international presence in copper, wires and cables for over 5 decades

Tomen Corporation, (Now Toyota Tsusho), Japan

World's 40th largest corporation by sales

TDT has technical know how and an ongoing support from **Southwire, USA**

Having the largest international market share for production of Continuous Cast Copper Rods.

We, at TDT would like to make a difference to the commoditized Indian copper market by making available customer friendly, technically fine tuned for end use, environment-friendly Copper rods.

The professional approach inherited has been carried forward by the induction of industry stalwarts on the board so as to differentiate the ownership from management of the company.

Shri Lakshman Das Ladha

Industrialist

Shri Balram Menon

Ex. CMD of Hindustan Copper Ltd.

Smt. Renu Daulet Singh

International Copper Expert

Shri Girdharlal Singhee

Businessman & leading socialite

Dr. Sharad Sarin

Professor – Marketing, XLRI, Jamshedpur

Shri Vaddi Venkat Ramana

International trading professional in non-ferrous industry

Smt. Abha Ladha

Industrialist & Socialite



Our Team

A team of competent and dedicated professionals having more than two hundred years of cumulative experience.

Engineer Owner CEO with a US patent in computers, personally monitors quality.

Team leader originally trained in Southwire, USA & with 20 years in copper rod making (out of 30 years in copper) managed rod production of leading Indian copper producers.

Continuous and innovative training of manpower, training at our licensor Southwire USA.

Raw Material

Raw material quality is not compromised, TDT use only LME Grade A Copper Cathodes.

Marketing

Pricing based on LME copper price index.

First and only Indian Company to offer OFHC and ETP Copper Rod in various diameters with State-of-the-Art Technology from UK & USA.

Coming closer to customers requirement, continuous innovation and joint sustainability.

TDT conducts, regular customer meets and symposium for discussions both technical and commercial in an open forum, with participation of smallest as well as the largest customers representatives





Environment

TDT is the only copper producer with No Air, Water or Solid pollution, it has been exempted from taking consent to operate by the Pollution Control Board.

Safety

TDT, started as a Japanese-Korean joint venture on Indian soil has successfully tried to incorporate safety procedures of all three countries—Japan, Korea & India, as implemented by the American Turn-key plant suppliers.

TDT team is trained by experts in the field of safety and provided adequate safety tools, personnel protective Equipment and other accessories, in-line with the humanitarian philosophy of the Chairman, in addition to the legal needs of the country

Quality

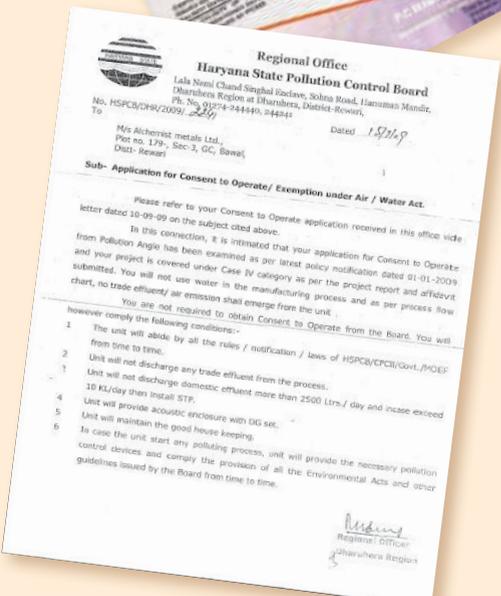
TDT Copper Rods are specially designed to meet end users needs depending on their technology and product end use.

One of the main components for highest possible efficiency in converting and transmitting electrical power is met by TDT Rods' uniform High Electrical Conductivity.

Whether as conductor in underground and aeronautic cables, or as enameled or insulated wires in transformers, Generators, motors and sound systems, TDT's uniform high quality and purity means that our Rod is much sought after for these demanding applications. Similarly, the uniform recrystallisation behavior, excellent drawing properties for medium and fine wires, goes a long way in assisting processing at Customer's end.

As the world goes for continued miniaturization and weight reduction while maintaining if not improving the reliability, TDT's excellent physical and chemical properties helps in many ways the electronic industry.

TDT Rod has been appreciated in almost all areas of application, whether it is insulated wire, power generation, technology and automobile industry.



Technology

Southwire, USA Technology - 79 plants world over (including 3 plants in India), most popular in copper rod making.

Over 55% of copper rod worldwide is made by this technology. TDT plant youngest one in India designed for continuous operations with backup for auxiliaries like power, water treatment, etc.

Special features and their effect

Automatic CO & combustion system controls
Reduces gas entrapment leading to low porosity

Online melt temperature control
This helps to avoid super heating of metal, ensuring lower porosity

Holding furnace tilting on auto mode to maintain constant tundish level
Variation in level can cause turbulence in flow, hollow cast bar, piping, which is avoided at TDT.

Automatic metering pin for metal flow control
This helps maintain consistently metal pool level reducing turbulence so as to avoid hollow cast bar/rod problems.

Side stream sand filtration in cooling system
Very fine soot particles are arrested, thereby avoiding clogging of nozzles and helping in uniform cooling to achieve uniformity in bar structure and grain size.

Nine stand no-twist, rolling mill with two rolls configuration
Reduces chances of rolled-in dust with adequate coolant spray

High pressure roll cleaning system
This minimises rolled-in dust

Online surface flaw detector
Immediate identification of surface flaws and ferrous inclusion.



TDT
COPPER

Products

Continuous Cast Copper Wire Rod

TDT a market leader specially in the North India in the production of ETP copper wire ROD. It uses LICENSES technology SCR 2000 from Southwire USA.

Electrolytic tough-pitch Copper Wire Rod (ETP)

(Standard Quality)

Standards

ASTM B 49 (table 1: UNS number C11040)

Diameter

8 mm to 16 mm +/- 0.38 mm, 19.6 mm +/- 0.51 mm

Sizes

9.5, 11, 12.5, 16 & 19.6 mm on request

Packing

Wooden Pallet 1.5 x 1.5 m and HDPE Cover

1, 2.2, 3 & 4 MT

Cu > 99.90%

O2 100 to 650 ppm

Physical Characteristics

Conductivity	%IACS	>101
Tensile strength	N/mm sq.	210-240
	Kg/mm sq.	21.5-24.5
Elongation	%	>30

Typical Analysis (PPM) ETP c 11040

Se	<2	Ni	<10
Te	<2	S	<15
Bi	<1	Ag	<25
Sb	<4	As	<5
Sn	<5	Pb	<5
Fe	<10		



Application

Wires and Conductors

Power cables to be drawn to minimum 0.2 mm.

Uses

Telecommunications

Power cables

Building wires

Railways

Metro Railways

Transformers

Automotive industry

Bare & Enamelled Wires

Copper Cast Bar

Conforming to ASTM B 5 (UNS No. C 11000).

Raw Material

Electrolytically refined LME Grade-A copper cathodes
As per ASTM B115

Dimension

Length (L)	610+/-10 mm
Bottom Width (A)	49 +/- 3 mm
Top width (B)	64 +/- 3 mm
Height (H)	36 +/- 3 mm

Oxygen Free Copper Wire Rod

The OFC Rod is manufactured, with ten upward casting lines from UK with a total capacity of 8000 tons a year.

Quality Features

- Superior Electrical Conductivity
- High Thermal conductivity
- High Ductility
- Good for low frequency signal transmission
- Less Surface Oxides
- High Creep Resistance
- Inclusion free product
- Good Weldability

Ideal Raw material For

- Drawing wires in the industry of large motors, transformers, wire and cables
- Aerospace industry, automotive harnesses, robotic arms, printer head cables
- High end audio and video systems
- Trolley wire (High Creep resistance)
- Production of ultra-fine magnet wire and as a feedstock for continuous extrusion for miniaturized circuitry of electronics industry
- Multi strand drawing machines
- Strips being made with conform process
- Wires, Cables and conductors for Energy and heat transfer system e.g. Solar & Thermal panels
- Telecom industry cables, requiring high electrical conductivity, good weldability, tight physical tolerance and very clean product



Technical Specifications

Standards OF Mechanical Properties (OF Rod , not rolled) : ASTM B 49 (Table UNS No. C10200-Copper type OFC)

Copper type	Unit	ASTM B49-09	TDT Typical
Copper, min	%min	99.90	99.996
Tellurium	ppm	2	< 1.0
Selenium	ppm	2	<1.0
Bismuth, max	ppm	1	1.0
Antimony max	ppm	4	0.9
Arsenic max	ppm	5	1.16
Tin, max	ppm	5	0.42
Lead max	ppm	5	0.7
Nickel max	ppm	10	0.76
Sulfur, max	ppm	15	7-8
Silver, max	ppm	25	9.2
Oxygen	ppm	<10	<10
% Elongation	%min	30	>38
Tensile strength	min mpa/N/	>170	>170
Surface Oxide	Angstrom max	750	<300
Conductivity	% IACS	100Min	>102
Diameter	mm	+/-0.38	< +/-0.20





**Chief Minister
Shri. Bhupinder Singh Hooda**

Commenting on Industrialisation in Haryana, mentions TDT Copper Ltd. as one of the leading direct foreign investment at Bawal, Rewari, Haryana.



Ahmedabad | Bengaluru | Bhiwadi | Delhi | Goa | Gurgaon | Gwalior | Jammu | Kolkatta | Mumbai | Rewari | Vadodara |

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