

United Metals Co.

# Copper **Wire Rods**

Brochure





## ABOUT ELSEWEDY ELECTRIC

**Elsowedy Electric** has transformed from a local manufacturer into a global leader in integrated infrastructure solutions. With over **19,000 employees** and exceeding **USD 5 billion in revenue**, we operate across five key sectors:

**5**

Billion  
Revenue

**30<sub>sq</sub>**

of Sustainable  
Industrial  
Communities

**4<sup>k+</sup>**

Overhead  
Transmission  
Lines

**40<sup>+</sup><sub>GW</sub>**

Total Number  
of Delivered  
Power

**95<sup>+</sup>**

substations  
Indoor & Outdoor  
substations

Financial Strength | Product Diversity | Sector Expertise | Geographical Reach

Our reach extends to **19 countries**, with 31 production facilities across **Africa and Asia**. We export high-end products to over **110 countries worldwide**, driven by an efficient all-in-one Engineering, Procurement & Construction (EPC) service. This allows us to deliver the most complex projects **on time and with exceptional quality**.

Beyond delivering reliable infrastructure, we're dedicated to fostering development in our communities. We spearhead the transition to a **sustainable energy future** through green projects and smart city initiatives across Africa, the Middle East, and Eastern Europe. Aligned with our 2030 sustainability goals, we aim to expand our positive impact, connect more customers with vital energy services, and champion decarbonization, digitalization, and **sustainable transformation in Egypt and beyond**.



Wire, Cable & Accessories



Electrical Products



Engineering & Construction



Digital Solutions



Infrastructure Investments

# Wire, Cable & Accessories

Business Line

17

Factories

350<sup>K+</sup>

Annual Total Capacity

500<sup>KV</sup>

UP TO 500 KV

## CUSTOMERS

Our copper wire rod finds its home in the demanding worlds of electrical cable production, automotive cable assembly, and electric motor manufacturing. UMC's global reach extends far and wide. We partner with over 50 esteemed clients in 20+ countries across Europe, Africa, and Asia, and proudly serve local customers in Egypt. Optimizing your supply chain, one JIT delivery at a time. We combine superior quality with just-in-time precision, along with dedicated customer service, for a truly seamless experience.

## EU CERTIFIED, GLOBALLY TRUSTED.

## SUSTAINABILITY

Over the span of six years, Elsewedy Electric has made significant progress in enhancing our sustainability performance. Our endeavors in this area have gained us recognition on various international Environmental, Social, and Governance (ESG) rating platforms.

In line with our commitment to combatting Climate Change, we have established greenhouse gas (GHG) reduction targets aligned with limiting global temperature rise to no more than 1.5 degrees Celsius, as outlined in the Paris Agreement. We are dedicated to driving sustainable practices within our industry as active members of the Alliance for Industry Decarbonization and Chapter Zero (CGI)

As part of the Elsewedy Electric Group, United Metals Company remains resolute in our commitment to bolster the Group's sustainability initiatives while minimizing our environmental footprint.







# About

**Elsewedy Electric subsidiary**, United Metals Company, boasts one of the Middle East & North Africa's largest copper wire rod plants. It **casts 130,000 tons per year of 8mm diameter copper**.

Developed **in 1998 with US giant Southwire**, the production line receives constant upgrades with the latest automation. Located **in 10th of Ramadan City**, the United Metals Plant enjoys easy access to major Mediterranean & Red Sea ports via international roads. More **than 70%** of UNITED METALS COMPANY's production gets exported **across Europe, the Middle East & Africa**.

---

## Raw Material

Made with **LME-registered GRADE A Copper Cathodes** (meeting ASTM B-115 and EN-1978 standards), we import raw materials only from top international producers.

Every batch undergoes rigorous testing to guarantee **it meets ASTM & EN standards for chemical composition**, ensuring the highest quality in every final product.

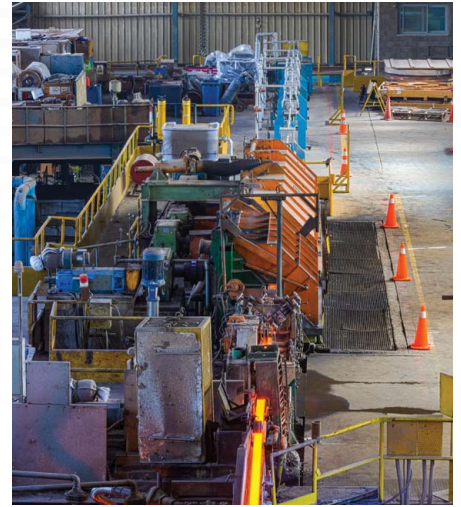
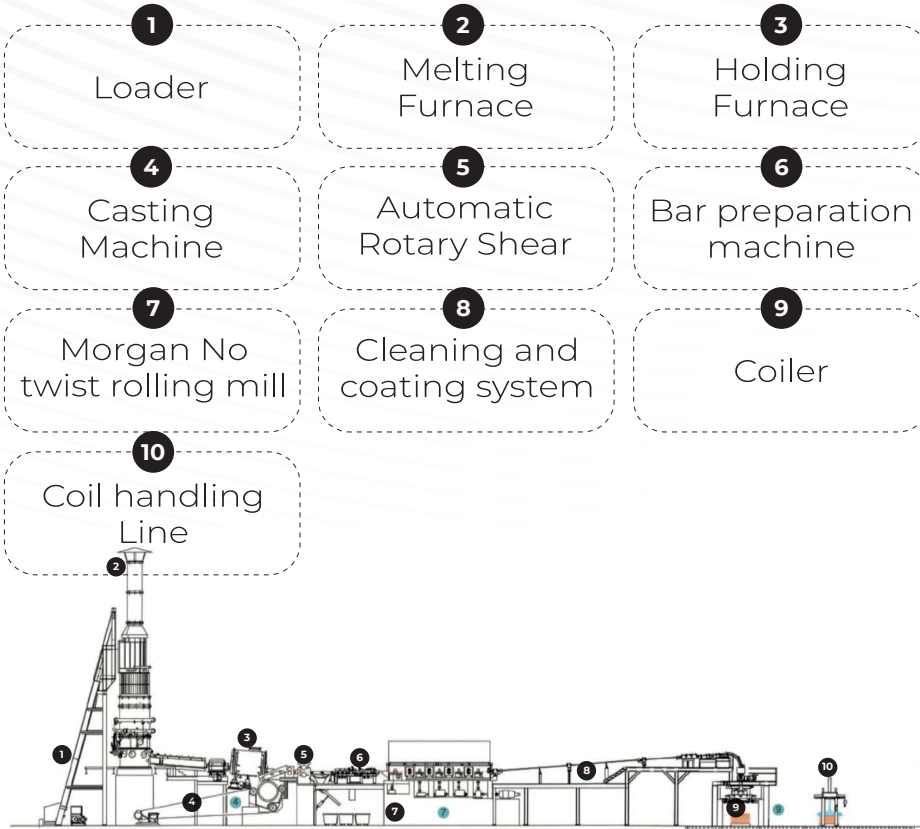
Our impressive annual capacity **transforms 130,000 tons of copper** into continuous **cast rods of 8mm diameter**.



# Production Process

## Automated Production

Operate around the clock, **our highly automated plant** keeps the copper flowing. From melting and casting to rolling and beyond, computerized equipment **seamlessly monitors every step**, ensuring precision and efficiency.



# Management Systems

## Automated Production

**UMC champions sustainability through a robust management system and targeted initiatives:**

- . **ISO Certifications:** We leverage industry standards like ISO 9001 (Quality), ISO 45001 (Safety), and ISO 14001 (Environment) to ensure consistent quality, minimize risks, and optimize our environmental footprint.
- . **Energy Efficiency:** LED lighting, variable speed drives, and other smart technologies help us reduce energy consumption significantly.
- . **Water Conservation:** Our water conservation program has achieved a remarkable 20% reduction, demonstrating our commitment to responsible resource management.
- . **Waste Reduction:** By implementing innovative practices, we've achieved a 30% decrease in waste, proving our dedication to minimizing our impact.

**UMC's unwavering commitment** to continuous improvement fuels our exploration of even more sustainable solutions.



# Quality Control

Quality under control. Every crucial parameter undergoes rigorous testing, guaranteeing consistently high-quality wire rod:

## OXYGEN TEST

This determines the oxygen content in copper. An oxygen determinator (Leco Instrument) gives the amount of oxygen present in copper in ppm (parts per million).

**01. Chemical composition test** – Analysis for chemical composition of both the cathode and final product is done using instrument.

**02. Surface oxide measurement** – Electrolytic removal of the surface oxid is used to determine the type and thickness of the oxide scale.

**03. Conductivity** – precision instrument measures the conductivity of copper.

**04. Twist test** – the wire rod is twisted back and forth ten times each and is then visually inspected.

**05. Elongation & tensile test** – The copper wire rod is tested for elongation at fracture and for tensile strength.

**06. Diameter checks** – These guarantee that the copper wire rod are correctly round and of minimum ovality.

**07. Flaw detector** – It is online non-destructive test to follow up the copper wire rod surface to sense and collect surface imperfection.



---

# Packaging

**Copper wire rods** weigh normally between **3,000 and 3,500 kg** each and could reach 4,500 upon customer request. These coils rest securely on robust wooden pallets, held tight by six straps and wrapped in a thick sheet of shrinkable **polyethylene plastic**.



# Copper Rod Plant



## Finishing Products

Specifications & quality control ————— 2023 - 2024

NO.	Description of Test	Test Results
01.	Specifications	ASTM B-49 & EN 1977
02.	Copper Min.%	99.99
03.	Oxygen (ppm)	200-300
04.	Diameter (mm)	8 +/-0.38
05.	Tensile strength Max (N/mm2)	230
06.	Tensile Elongation Min % (250mm)	40.0
07.	Electrical Conductivity Min (IACS%)	101
08.	Surface Quality	Clean & free from Imperfection
08.	Packing Condition	ASTM B49

### APPLICATION

The ultimate copper wire rod for diverse applications. Its exceptional drawability and rolling properties make it ideal for individual wires (various gauges), stranded conductors, enameled wires (various thicknesses), and flat wire. Unleash your design potential.

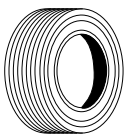
# Global Presence



**31** PRODUCTION  
FACILITIES

**19** OPERATION  
COUNTRIES

**110** EXPORTING  
COUNTRIES



**United Metals Co.**

**info-umc@Elsewedy.com**

Cairo Festival City – Business Park  
Building 13C03 – P.O Box 310  
New Cairo, Egypt – Tel. +20 2 27599744/5

Factory Address : 10th of Ramadan City  
Industrial Zone A3



[www.elsewedyelectric.com](http://www.elsewedyelectric.com)

