

Copper-Clad Steel Ground Rod

Copper-clad steel ground rod is a composite grounding electrode featuring a high-strength steel core coated with an electrolytic copper layer (purity $\geq 99.9\%$) via electroplating or continuous four-dimensional cladding. With a minimum copper thickness of 0.254mm (10 mil), it complies with UL 467 and DL/T 1312 standards. It combines the mechanical strength of steel with copper's excellent conductivity and corrosion resistance. The metallurgical bonding between copper and steel ensures superior anti-corrosion and tensile performance, offering a design life exceeding 40 years. Widely used in power pylons, substations, telecom bases, and petrochemical tank farms, it supports both exothermic welding and mechanical connections, serving as a highly efficient, long-life alternative to traditional galvanized steel grounding materials.



KEY FEATURES

1. Superior Corrosion Resistance
2. High Mechanical Strength
3. Excellent Conductivity
4. Reliable Connections
5. Cost-Effective & Eco-Friendly

APPLICATIONS

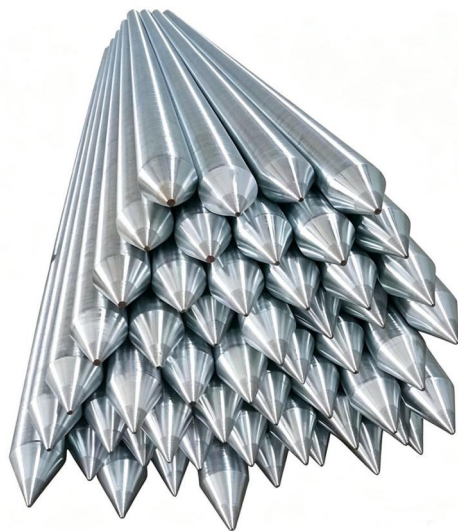
1. Power pylons
2. Substations
3. Telecom bases
4. Petrochemical tank farms

SPECIFICATIONS

Parameter	Typical Value	Standard
Cu Thickness	$\geq 0.254 \text{ mm (10 mil)}$	UL 467
Cu Purity	$\geq 99.9\%$	ASTM B170
Tensile Strength	$\geq 600 \text{ N/mm}^2$	ASTM A370
Straightness	$\leq 1 \text{ mm/m}$	ANSI/TIA-222
Bond Strength	No cracking after 180° bending	UL 467 Clause 11
Resistivity	$\leq 0.059 \Omega \cdot \text{mm}^2/\text{m}$	IEC 60468

Zinc-Clad Steel Grounding Rod

The zinc-clad steel grounding rod features a high-quality low-carbon steel core continuously extruded with a high-purity zinc sheath ($Zn \geq 99.995\%$). It ingeniously combines the high mechanical strength of steel with the ultra-low potential characteristics of zinc, integrating both "physical grounding" and "cathodic protection" into a single unit. Utilizing the sacrificial anode action of zinc, it not only dissipates fault currents efficiently but also actively protects adjacent steel structures from electrochemical corrosion. Offering significantly enhanced corrosion resistance compared to conventional materials, it is particularly suitable for petrochemical storage tanks, oil pipelines, and highly corrosive soil environments, representing an optimal solution for lightning protection grounding and cathodic protection systems.



KEY FEATURES

1. Dual Function - Grounding + Cathodic Protection
2. Self-Regulating, No Over-Protection
3. High Mechanical Strength
4. Long Life, Low Maintenance
5. CP-System Friendly

APPLICATIONS

1. Petrochemical storage tanks
2. Oil pipelines
3. Highly corrosive soil environments

SPECIFICATIONS

Parameter	Typical Value
Zn Purity	$\geq 99.995\%$
Zn Thickness	3 mm
Tensile	$\geq 400-600 \text{ N/mm}^2$
Open Circuit Potential	-1.03 V (vs CSE)
Drive (vs steel)	0.20-0.25 V
Current Efficiency	Current Efficiency
Soil ρ	$< 500 \Omega \cdot \text{m}$
Life	20-30 years