Zinc Ribbon

New generation of high-quality material for challenging cold weather applications

ENERGY & MINING

It is becoming more common for pipelines to be constructed within existing AC transmission corridors. While this approach addresses many challenges typical of new pipeline construction, AC interference can present additional safety and corrosion-related issues.

Today, many electric power generation companies require that qualified corrosion professionals perform data collection and studies to determine the presence and degree of AC interference on crossing or parallel pipelines within AC corridors. The primary means of mitigating AC voltages on such pipelines is extruded zinc ribbon anodes.

NACE SP0177-00: Recommended Practice on Mitigation of Alternating Current Lightning Effects on Metallic Structures and Corrosion Control Systems

The National Association of Corrosion Engineers (NACE) has indicated that AC voltage to ground of >15 volts is considered to be a potential shock hazard. Voltages and currents above the level ***require*** AC mitigation or evidence that a potential shock hazard does not exist.

Zinc Ribbon

Although the industry has experienced considerable success with the application of zinc ribbons for induced AC and fault currents, one of the challenges has been the use of zinc ribbons in cold weather environments (typically less than 52˚ F). Having worked with the University of Wisconsin, the General Research Institute of Non-Ferrous Metals (GRINM) and American Carbon, Corrpro has developed a zinc material that is designed for challenging colder weather climates. Further, this state-of-the-art material meets the most stringent industry standards, including ASTM B 418 Type II standards and is ROHS compliant. It is manufactured in an ISO 9000 certified facility.

This superior zinc material essentially ensures high performance. Our QA/QC program is perhaps the most stringent in the industry.

AC mitigation techniques should only be employed through conscientious and professional engineering recommendations. As a leading provider of AC mitigation and cathodic protection services, Corrpro's registered professional electrical engineers and NACE International certified corrosion specialists are available to assist with AC interference studies and AC mitigation design and construction.

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corrpro®
An Aegion™ Company

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Zinc Anodes

The new generation of high-quality zinc material generates an open circuit potential of 1.1 volts with respect to a Cu/CuSO4 reference electrode. Made from 99.99 percent pure high-grade zinc, Corrpro's zinc anodes offer a 90 percent current efficiency and deliver a current capacity of 335 amp-hrs./lb. This high-purity composition also ensures the anode material is more resistant to passive films. In fact, Corrpro's zinc anodes meet the highest industry standards.

Standard Sizes

Product Description	Cross Section	Weight	Wire Core Diameter	Typical Lengths*	Packaging	Bending Dia. (min) at -4˚F, -20˚C	Tensile Strength
Super Size	1”x1-1/14” (±0.08”) 25.4mm x 31.8mm (±2mm)	2.4 lb/ft 3.57 kg/m (-0%, +3%)	0.189” (±0.02”) 4.8mm (±0.5mm)	100 ft	Hand coil	27.55” (700mm)	195 MPa 28,282 psi
Plus Size	5/8”x7/8” (±0.06”) 15.9mm x 22.2mm (±1.5mm)	1.2 lb/ft 1.785 kg/ft (-0%, +3%)	0.134” (±0.014”) 3.4mm (±0.35mm)	200 ft	Wooden reels**	9.84” (250mm)	165 MPa 23,930 psi
Standard Size	1/2”x9/16” (±0.04”) 12.7mm x 14.3mm (±1mm)	0.6 lb/ft 0.893 kg/m	0.134” (±0.010”) 3.4mm (±0.3mm)	500 ft	Wooden reels**	3.93” (100mm)	250 MPa 26,250 psi
Small Size	11/32”x13/32” (±0.04”) 8.7mm x 11.9mm (±1mm)	0.25 lb/ft 0.372 kg/m (0%, +3%)	0.102” (±0.008”) 2.6mm (±0.2mm)	1,000 ft	Wooden reels**	3.93” (100mm)	176 MPa 25,525 psi

**Length tolerance: -0%/+5%. Other reel/coil lengths available.*

***Wooden reels can include information such as project name, owner name, reel number, etc. based on customer specifications. Typical reels are 24" diameter by 15" wide.*

Electrochemical Properties**	
Open-Circuit Voltage (-V)	>1.10
Closed-Circuit Voltage (-V)	>1.05
Actual Capacity (A-h/lb)	353
Current Efficiency (%)	90
Resistivity between core & Zinc (Ω)	<0.001

**With respect to Cu/CuSO4*

Standard Applications

- AC mitigation
- Aboveground storage tank cathodic protection
- Pipeline cathodic protection
- Grounding overhead structures
- Especially suited for cold weather applications

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