

Pre-wired MMO Tubular Anodes

Pre-wired MMO (Mixed Metal Oxide) tubular anodes are high-efficiency, long-life anode assemblies used in Impressed Current Cathodic Protection (ICCP) systems. Their core consists of a titanium tube substrate coated with precious metal oxides (such as iridium-tantalum oxide), combining excellent electrical conductivity with corrosion resistance. The assembly integrates factory-installed lead wires using a center connection structure, sealed with epoxy resin encapsulation and multi-layer protection to ensure reliable electrical contact and waterproof performance, allowing for direct installation in soil, freshwater, or seawater environments.

These anodes are widely used in cathodic protection systems for buried oil and gas pipelines, tank foundations, offshore platforms, and port facilities, particularly in deep well anode beds. Their advantages include uniform current distribution, stable output, a design life of over 20 years, and ease of installation, effectively suppressing corrosion of metal structures while reducing lifecycle maintenance costs.



KEY FEATURES

1. More than 20 years
2. High current output
3. Harsh environments withstand
4. Super coating adhesive
5. Excellent coating uniformity

PRODUCT SPECIFICATIONS

Titanium substrate: ASTM B338 Grade 1 or Grade 2

MMO Coating: $\text{IrO}_2/\text{Ta}_2\text{O}_5$ (soil/Freshwater environment) or $\text{IrO}_2/\text{RuO}_2$ (sea water environment)

Outer Diameter: $\Phi 19/25.4/32\text{mm}$

Wall Thickness: 0.9-2.0mm

Length (single piece): 500/1000/1200/1500mm

Cable: XLPE/PVC (soil/Freshwater environment)

PVDF/HMWPE (seawater/High chloride environment)

Connecting Resistance: $\leq 0.01 \Omega$

Current Density: 50-100A/m² (soil/Freshwater environment); Up to 600A/m² (seawater/High chloride environment)

Service Life: ≥ 20 years

APPLICATIONS

1. Water Tank Protection
2. Deep Well Anodes
3. Marine Structures Protection
4. Tank Bottom Protection
5. Soil, Brackish and Seawater Applications