

MMO Tubular Anode

The MMO (Mixed Metal Oxide) Tubular Anode is an advanced anode technology used primarily in cathodic protection systems to prevent corrosion of metal structures.

MMO Tubular Anodes are made of a base metal, typically titanium Grade 1 or 2, coated with a layer of mixed metal oxides ($\text{IrO}_2/\text{Ta}_2\text{O}_5$). The oxides usually include iridium, ruthenium, and titanium, which enhance the anode's performance in various environments.

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

Tubular Anodes are manufactured using high-tensile seamless titanium tubes that meet ASTM B338 Grade 1 or Grade 2 standards, ensuring longer life and consistent thickness throughout their design lifespan.

MMO COATING

The MMO coating, composed of $\text{IrO}_2/\text{Ta}_2\text{O}_5$ or $\text{IrO}_2/\text{RuO}_2$, is suitable for all cathodic protection applications. Coating thicknesses are tailored to specific environmental conditions, tested using X-ray, and verified for lifespan through high-current acceleration tests. ($\text{IrO}_2/\text{Ta}_2\text{O}_5$ coating is recommended to be used in soil environment while $\text{IrO}_2/\text{RuO}_2$ in sea water environment)



APPLICATIONS

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

Wall Thickness	Length	Output Current	Life Span	Application Environment	Remarks
0.9mm	1m	5A	20 years	Coke/Fresh Water	Other Sizes Can be Customized
	1m	30A		Sea Water	
	1m	10A		Coke/Fresh Water	
	1m	60A		Sea Water	
	1m	8A		Coke/Fresh Water	
	1m	48A		Sea Water	
	1.2m	12A		Coke/Fresh Water	
	1.2m	72A		Sea Water	

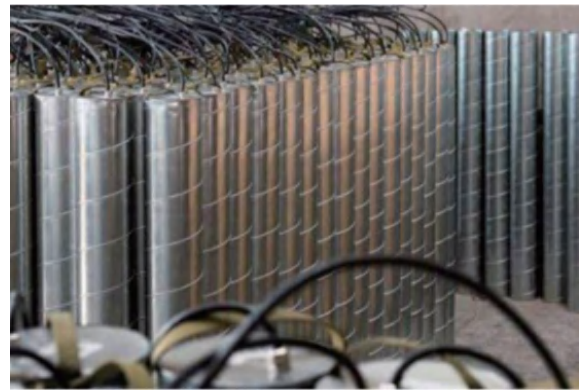
MMO String Anode

MMO string anodes are widely used for the cathodic protection of long - distance oil and gas pipelines buried underground. They can be installed parallel to the pipeline or vertically buried in deep well, providing a uniform current distribution along the pipeline's length. This helps prevent corrosion in the soil environment, where factors such as soil resistivity and moisture content can vary.

* 2 of 25mm Dia. x 1500mm Lenght MMO tubular anodes, connection spacing 3m(end to end), end cable 75m of 1x16mm² PVDF/HMWPE



MMO TUBULAR ANODE WITH WIRE
(Tank Internal Installation)



MMO TUBULAR ANODE PACKAGED IN CANISTER
(Deep Well Installation)