

## MMO Tubular Anode (JMT Series)

MMO Tubular Anode consists of a titanium tube to ASTM B338 Gr. 1 coated with precious mixed metal oxides ( $\text{IrO}_2 / \text{Ta}_2\text{O}_5$ ).

JMT Series MMO Tubular Anodes are made by an automated brushing machine with unique etching and thermal sintering technology, enabling us to produce a homogeneous coating with superior adhesion properties whilst maintaining a production capacity up to 500,000 Nos of MMO Tubes each year.

Our MMO coating is highly conductive and the anodes have a very low consumption rate. This combination of characteristics results in a long-life expectancy even when the anode is subjected to a high current density rating. Our JMT Series Anodes life can exceed 25 yrs. with a  $600\text{A/m}^2$  Current Density.

## APPLICATIONS

- String MMO Tubular Anodes for internal wall of tanks and offshore piles.
- Canister MMO Tubular for shallow vertical ground-beds
- Canister MMO Tubular Anodes for shallow horizontal ground-beds
- Canister MMO Tubular Anodes for Deep well
- Underground storage tanks
- Above Ground storage tanks

## PRODUCT ADVANTAGES

- Reliable, Dimensionally and Chemically Stable
- Low and uniform consumption rate leads to long anode life
- MMO automated application enabling superior adherence between coating and substrate
- High chemical stability, even in environments in low pH values
- Lightweight (Easy transportation and easy handling)



## CHEMICAL COMPOSITION

|                  |                                                                      |
|------------------|----------------------------------------------------------------------|
| <b>Anode</b>     | MMO Coating / Titanium Tube                                          |
| <b>Substrate</b> | ASTM B265 Titanium Grade I Titanium Tube                             |
| <b>Coating</b>   | Ir-Ta Mixed Metal Oxide Catalyst<br>Ir-Ru Mixed Metal Oxide Catalyst |

## String Anode

JMT String Anode is comprised of multiple MMO tubular anodes and cable, which are connected by special pure copper connectors, designed by Jennings Anodes USA to achieve a high-tensile but low resistance and water proof connection.

JMT String Anode is factory-assembled and ready for installation on-site. All connections are encapsulated with good epoxy resin to create a waterproof seal.



## Canister Anode

JMT Canister Anode can be used to protect buried metallic structure, transmission pipelines or buried tanks or a variety of other buried steel structures.

JMT Canister Anode is comprised of spiral steel canisters, high conductive coke breeze, assembled with acid/chlorine resistant cable.

JMT Canister Anode can be connected in string with built-in vent pipes per requirement. with good epoxy resin to create a waterproof seal.

## ELECTROCHEMICAL PROPERTIES

| Anode Model      | Anode Diameter  | Anode Length   | Current Output In Coke/Soil (100A/m <sup>2</sup> ) | Current Output In Seawater (600A/m <sup>2</sup> ) | Life Expectancy |
|------------------|-----------------|----------------|----------------------------------------------------|---------------------------------------------------|-----------------|
| JA - MMO - T160  | 5/8" (16.0mm)   | 39.4" (1000mm) | 5Amps                                              | 30Amps                                            | 25yrs.          |
| JA - MMO - T190  | 3/4" (19.0mm)   | 39.4" (1000mm) | 6Amps                                              | 36Amps                                            | 25yrs.          |
| JA - MMO - T250  | 1" (25.0mm)     | 39.4" (1000mm) | 8Amps                                              | 48Amps                                            | 25yrs.          |
| JA - MMO - T250L | 1" (25.0mm)     | 60" (1524mm)   | 12Amps                                             | 72Amps                                            | 25yrs.          |
| JA - MMO - T320  | 1 1/4" (32.0mm) | 48" (1220mm)   | 12Amps                                             | 72Amps                                            | 25yrs.          |
| JA - MMO - T500  | 2" (50.0mm)     | 47.2" (1200mm) | 19Amps                                             | 114Amps                                           | 25yrs.          |

- All weights and dimensions are nominal and subject to variation in material compositions and our foundry tolerance.
- Above standard sizes are available at Jennings Anodes warehouse. Other configurations are available upon special request.

Please kindly contact Jennings Anodes Sales Representatives for further assistance.

### Ordering Information

- Anode Model and Anode Configuration
- Quantity
- Delivery Address (Estimated Shipping Cost)

## PACKING

### Shipping Documents

- Invoice, Packing List, Full Chemical, Physical & Performance Test Reports
- 3rd Party Independent test reports can also be provided at cost