

MMO COATED TITANIUM TUBULAR ANODES

IMPRESSED CURRENT CATHODIC PROTECTION

DESCRIPTION

MMO Tubular Anode is one of the most popular anodes due to the large surface area and the protected anode-cable connection. This permits greater current output in all types of ICCP anodes and provides the longest life. The MMO anodes prefer not only in soil environment but also chloride electrolyte, such as seawater and brackish water.

The MMO coating consumes at negligible amount [less than 1.0 mg/amp-year]. By adjusting the coating thickness, the anode life can be extended by design specifications.

DTSI Titanium Tubular Anodes are the most flexible anode in size, life and current rating by adjusting the MMO coating thickness. The anode performance is confirmed by the acceleration acid testing using NACE Standard TM0108. This provides you the most cost-effective anode in the industry.

SPECIFICATIONS

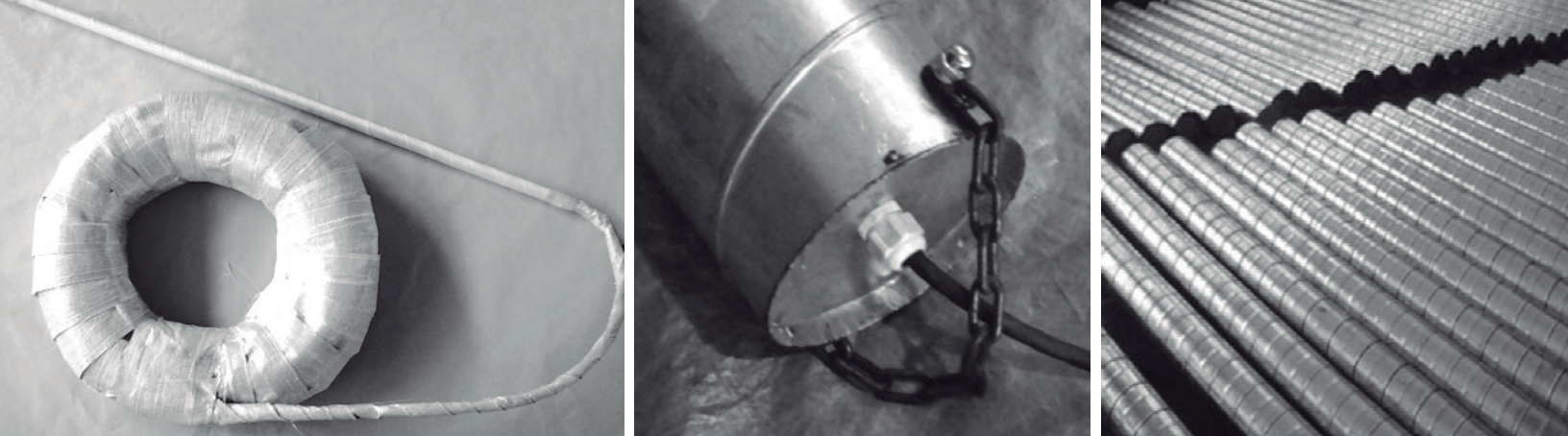
dimensions

- > Length 100 mm to 2,000 mm
- > Diameter 16 mm, 19 mm, 25 mm and 32 mm

- > Substrate: ASTM B-265, Grade 1 Titanium
- > MMO Coating Uniformity: Greater than 90%
- > Center Anode Connection Resistance: 1 micro OHM
- > Standard Anode Life: 30 years
[Longer anode life is available]

MMO anodes are supplied either bare or in canisters. For order, please specify the anode life, the current rating, the application, the cable type, size and length.





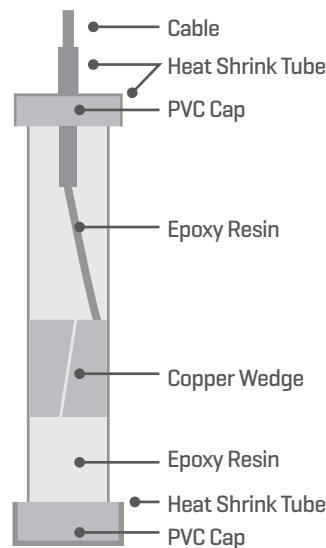
MMO TUBULAR ANODE DIMENSIONS AND CURRENT OUTPUTS [1000 mm in length]

Type [Diameter - mm]	D16	D19	D25	D32
Max. Current Output in Seawater	14.5 amp	17 amp	22.5 amp	28.5 amp
Max. Current Output in Seawater	7.3 amp	8.5 amp	11.3 amp	14.3 amp
Max. Current Output in Seawater	2.4 amp	2.4 amp	3.8 amp	4.8 amp
Max. Current Output in Seawater	2.4 amp	2.4 amp	3.84 amp	4.8 amp

QUALITY ASSURANCE

The following quality assurance is made throughout the manufacturing process:

1. Certificate of compliance of the titanium substrate.
2. The size and length.
3. Life acceleration test using acid solution using NACE Standard TM0108.
4. Visual inspection of MMO coating and cable.
5. Electrical continuity test between the anode and cable.
6. Hydraulic sealing test.
7. MMO coating adhesion testing.

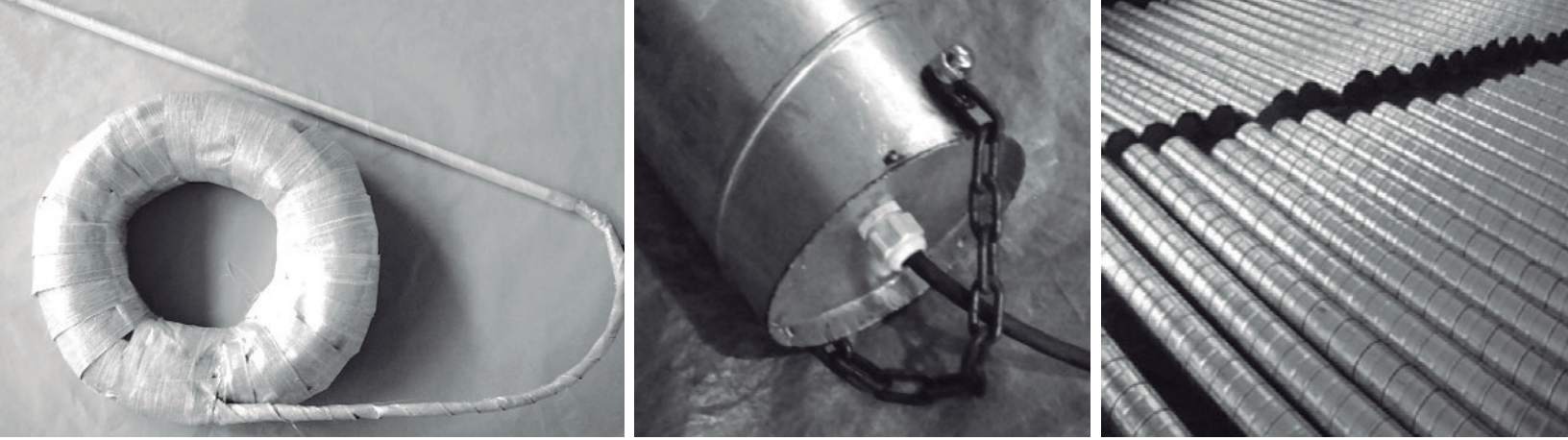


CABLE INFORMATION

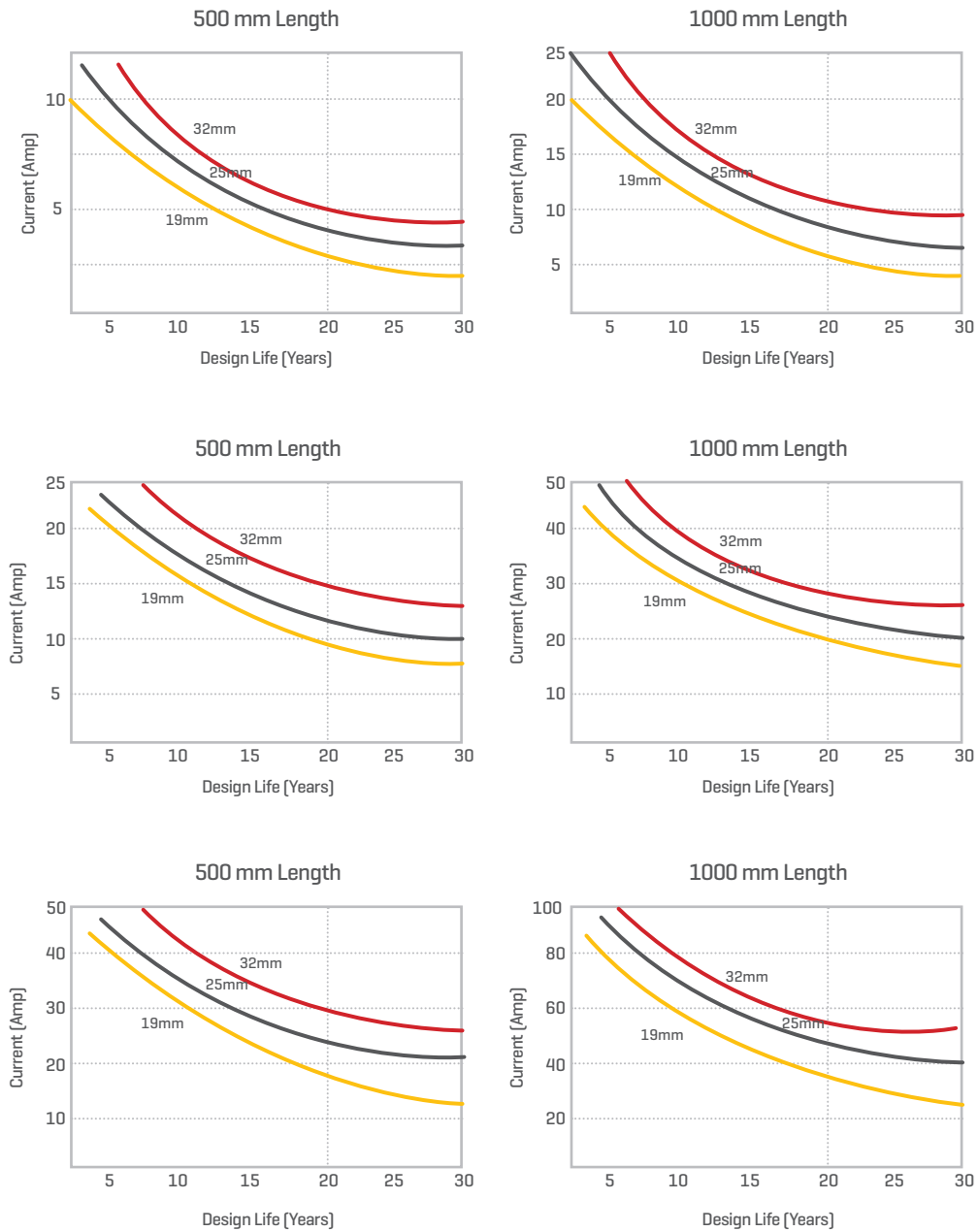
XLPE/PVC
HMW/PE
PVDF/HMWPE

Suitable for underground and underwater application. The cable is flexible and easy to handle.
Suitable for underground and underwater application. The cable is not flexible.
Insulation is super durable for soil, water and concrete application. This insulation provides extra longer life to the cable.

Cable Size [mm ²]	AWG Cable Size	Cable Diameter [mm]	Current Capacity [Amp]
10	8	8.8	40
16	6	9.5	55
25	4	11.0	70
35	2	12.0	85



MMO TUBULAR ANODE DESIGN LIFE AND CURRENT RAITING



Coke And Fresh Water And Coke

Brackish Water

Seawater