MIXED METAL OXIDE (MMO) PROBE ANODES



50 YEARS EXPERIENCE IN CATHODIC PROTECTION

JENNINGS ANODES

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DATA SHEET

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This probe anode is an through-wall impressed current anode used to protect the internal surfaces of condenser waterbox, pressure vessel, process tank, heat exchanger, intake/discharge piping, etc.

It is comprised of MMO coated titanium rod and machined stainless steel housing with advanced sealing system subject to water-tight assembly. And the inactive area of the probe anode can be provided in varying lengths to accommodate the design and installation.

Quality Substrate Material

The titanium substrate of the anode is selected according to ASTM B265 Grade I standard requirements. The high purity titanium has proven excellent chemical corrosion resistance, low electrical resistance, and high mechanical integrity against damage.

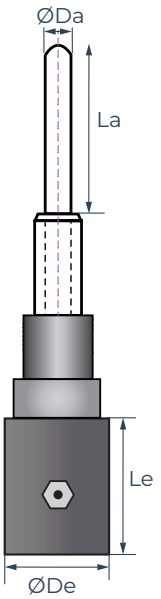
Noble Metal Oxide Coating

The Ir–Ta (IrO2/Ta2O5) mixed metal oxide catalyst, sintered to the surface of titanium substrate, demonstrates high chemical stability when exposed to high current density. We are able to produce anodes with differing coating thickness and noble metal oxide ratios. Strict quality procedures are followed throughout the coating process to ensure appropriate coating thickness and adhesion.

Long Working Life

The MMO coating film on the probe rod creates a protective stable layer ensuring a low consumption of the anode. These anodes can have a life expectancy of 100 years based on a 3 A/m² current density.





SPECIFICATIONS

Item No.	Anode Dimensions		Enclosure Dimensions	
	ØDa	La	ØDe	Le
JA–MPR-9.5	0.375” (9.5 mm)	15” (380 mm)	2.2” (55 mm)	2.4” (60 mm)
JA–MPR-19	0.75” (19 mm)	7.9” (200 mm)	2.8” (70 mm)	4.3” (110 mm)
JA–MPR-25	0.98” (25 mm)	6” (150 mm)	2.9” (72 mm)	2.3” (58 mm)

Notes: All dimensions and weights are nominal. The parameter provided is subject to variation in material compositions and Jennings Anodes foundry tolerance.

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TESTING DETAILS

We employ ISO 9001:2015 quality management system and rigorous internal testing standards to ensure the optimum lifespan and performance of our anodes. Each anode is labelled with a unique serial number for quality tracking.

Technical Measurement	Chemical Composition	Electrochemical Performance	Physical Properties
Testing Standard	ASTM E120	NACE TM0180 / NACE TM0294 / ASTM D3359	Foundry ITP
Testing Content	Chemical Analysis of Titanium Substrate	Coating Thickness and Adhesion	Surface Finish Dimension & Weight
Equipment	Spectrometer	JCM-6000 Plus Scanning Electron Microscope / DWW-K-100 Galvanostat / VCC101A Multimeter / Calomel Reference Electrode	Calibrated Digital Measuring Devices

* Third party testing is conducted by customer's special request at extra charge.





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