



Jetty ICCP Anode Data Sheet

pml manufacture a range of Platinised and MMO titanium anodes designed for use in impressed current cathodic protection systems for Jetties and Harbours



pml jetty anodes are designed for use on harbours and jetties where individually designed anodes are required to provide the necessary high current output and design life associated with this type of installation. The designs incorporate all the requirements for either close surface fitting of plate anodes or offset cantilever fitting of rod/tubular anodes to sheet or tubular piling.

The anodes are normally provided with a solid titanium plate, rod or tube substrate although niobium may be used in certain cases if a higher operating voltage is required. The substrate is provided with mixed metal oxide coating consisting of mainly $\text{IrO}_2/\text{Ta}_2\text{O}_5$ and suitable for use in seawater.

The anodes are designed to operate within the following normal parameters:

Sea Water Electrolyte	Maximum Design Current Density	Maximum voltage at anode	Anode life (standard)
MMO	600 A/m ²	8 V	20 years
Platinised Titanium	1000 A/m ²	8 V	20 years

If anodes are operating in electrolytes other than seawater the above parameters may change considerably, please contact us.

The standard plate anode comprises a MMO coated titanium plate with exposed area of 45mm wide x 560mm or 1130mm long giving a current output of 15 amps or 30 amps respectively.

Pipeline Maintenance Limited

Cathodic Protection Engineering and Materials Supply
 11 & 12 Merlin Park, Mildenhall,
 Suffolk, IP28 7RD, UK
 Tel: +44 (0) 1638 711955
 Fax: +44 (0) 1638 711953

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email: sales@pipelinemaintenance.co.uk
 website: www.pipelinemaintenance.co.uk



Anode current rating (Amps)	Anode length (mm)	Anode Width (mm)	Overall length (mm)	Overall width (mm)
15	520	45	860	75
30	1120	45	1550	75

The anode is mounted in an insulated assembly and sealed with epoxy resin. The cable connection is lugged and bolted direct to the plate and fully encapsulated to provide a watertight connection. Cable size, type, and length are customised to Customer's specific requirement. The backplate can be extended to provide a dielectric shield if required.

The standard cantilever type anode is manufactured from platinum coated 12mm solid rod titanium or MMO coated 19mm, 25mm or 32mm diameter titanium tubes. These can be in the form of an "aerial" as shown above or may be a single anode depending upon current output requirement. The cable assembly is encapsulated in an uPVC housing fitted with a standard flange connector for bolting to a suitable support assembly of either uPVC or coated mild steel pipe depending upon the water conditions in which it is to operate. The tubular anodes are rated as follows:

Environment	Anode Size (mm)	Current Output (amps)	Life (Years)
Seawater	19 dia x 1200	45	20
Tubular	25 dia x 500	25	20
MMO	25 dia x 1000	50	20
	25 dia x 1200	60	20
	25 dia x 1500	75	20
	32 dia x 1200	75	20
Seawater Solid Platinised Titanium	12 dia x 250	9	20
	12 dia x 500	18	20
	12 dia x 750	27	20
	12 dia x 1000	36	20
	12 dia x 1250	45	20

Anode current rating can be customised by modifying the length of the anode. For aerial type anodes, current rating is proportional to the total exposed length.

Anode life can be extended up to 30 years or more by increasing the thickness of the MMO coating or platinum.