

Betelguard Platinum (Pt) Titanium Rod Anode



Betelguard Platinized titanium (Pt-Ti) Anodes consist of a titanium substrate (rod) coated with platinum. Platinum is the ideal permanent impressed current anode material. It is one of the noblest metal and in practically all environments forms a thin invisible film that is electrically very conductive. In addition, the exchange current densities of most anodic reactions on the Pt surface are greater than on other anode materials.

Specification

Anode Properties and Performance:

Rod diameter:	6, 12, 16, 25, 35 mm
Length:	Varies (1,000 mm max)
Pt thickness:	Greater than 3.2 micron (Specified)
Usage rate of platinum:	6 mg/amp/year
Expected life:	40 years Min.
Catalyst:	Pure platinum

Titanium Substrate:

Composition:	Titanium, Grade 1
Coefficient of thermal expansion:	$8.7 \times 10^{-5}/^{\circ}\text{K}$
Thermal conductivity at 20°C:	15.6 W/m ² °K
Electrical resistivity:	0.000056 ohm-cm
Modulus of elasticity:	105 GPa minimum
Tensile strength:	245 MPa minimum
Yield strength:	175 MPa minimum
Elongation:	24% minimum

ASTM B265 - Titanium and Titanium Alloy Strip, Sheet, and Plate

Fe max	O max	N max	C max	H max
0.2	0.18	0.03	0.1	0.015