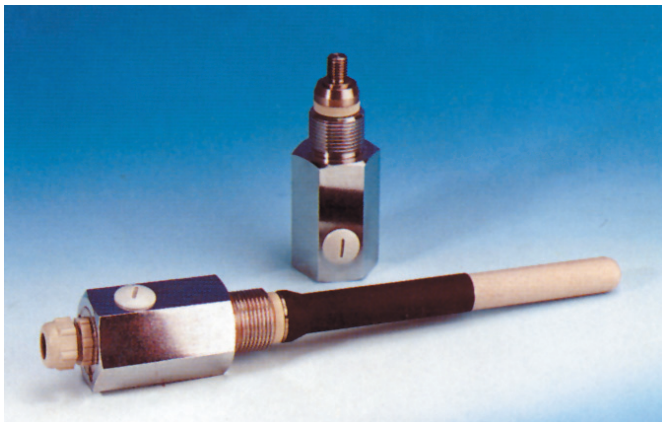


Platinised Titanium/Niobium/Tantalum (Pt/Ti-Nb-Ta) anodes

Platinum is an excellent anode material due to its high conductivity and low consumption rate. Because of its high cost, it is not economical to use platinum by itself. Platinum can be made practical for use by cladding or electroplating a thin layer of platinum over a lower cost substrate. This also increases the effective anode surface area. The substrate must also be able to form an insulating oxide film under anodic conditions. The substrate materials most commonly used are titanium, niobium and tantalum. Of these, titanium is least expensive but it has a much lower breakdown potential than niobium or tantalum. Titanium oxide breaks down at anodic potentials in the 12 V range.

(Pt/Ti-Nb-Ta) Rod anodes

Screw-in type Pt/Ti-Nb-Ta rod anodes with pressure resistant head structure are widely used for internal protection of condensers and other process equipment.



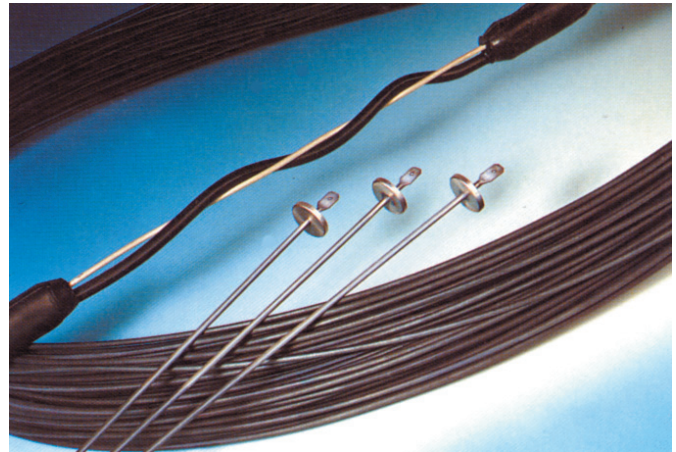
Technical data

| Base metal | Titanium | Niobium | Tantalum |
|----------------------------------|---------------------------------------|---------|----------|
| Max. allowable operating voltage | 12 V | 40 V | 80 V |
| Rod length | 150 - 2500 mm | | |
| Rod diameter | 4 / 6 / 8 / 10 / 12 / 16 / 20 / 25 mm | | |
| Pt-coating thickness | 5 / 7.5 / 10 µm | | |
| Consumption rate | approx. 0.08 g / A year | | |
| Max. current density | 10 A / dm ² | | |

All weights and dimensions are nominal and subject to variation in material compositions.

(Pt/Ti-Nb-Ta) Wire anodes

Pt/Ti-Nb-Ta wire anodes are used for the internal protection of water tanks and pipelines.

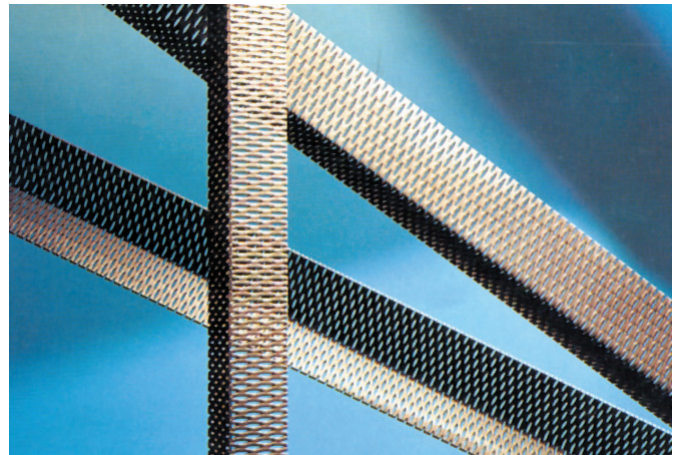


Technical data

| Base metal | Titanium | Niobium | Tantalum |
|----------------------------------|-------------------------|---------|----------|
| Max. allowable operating voltage | 12 V | 40 V | 80 V |
| Wire length | 100 m | 50 m | 50 m |
| Wire diameter | 1 / 2 / 3 / 4 mm | | |
| Pt coating thickness | 5 / 7.5 / 10 µm | | |
| Consumption rate | approx. 0.08 g / A year | | |
| Max. current density | 10 A / dm ² | | |

(Pt/Ti-Nb-Ta) Mesh anodes

Pt/Ti-Nb-Ta mesh anodes are used for the protection of reinforced concrete structures.



Technical data

| Base metal | Titanium | Niobium | Tantalum |
|----------------------------------|-------------------------|---------|----------|
| Max. allowable operating voltage | 12 V | 40 V | 80 V |
| Mesh length | max. 2500 mm | | |
| Mesh width | max. 800 mm | | |
| Pt coating thickness | 5 / 7.5 / 10 µm | | |
| Consumption rate | approx. 0.08 g / A year | | |
| Max. current density | 10 A / dm ² | | |