TANTALINE®

Application Note: Tantaline® Treated Lab Reactors

Description

Reactors are designed to carry out chemical reactions to yield a product that is chemically pure. Reactors can be exposed to extremely aggressive solutions resulting in materials degradation issues due to corrosion leading to increased costs, maintenance and downtime. Even the more expensive alloys like duplex stainless steels, Hastelloy, titanium, zirconium are challenged to provide a cost-effective and a reliable solution. The corrosion resistance, durability, and heat transfer properties of tantalum makes it an ideal material for challenging applications. Tantalum's rapidly self-reforming surface oxide layer resists corrosion thereby minimizing downtime and stoppages in equipment and parts.

Availability

- Baffle Assays
- Reactor Housings
- Valve Bodies
- Gauge & Adapter Extentions
- Plugs, Rings, Needles
- Stir Shafts
- Orifice Ring & Cones
- Couplings
- Collars
- Bottom Caps
- Sampling Tubes
- Impellers

Benefits

Tantaline® treatment is a cost-effective approach providing customers with an alternative to exotic materials and bulk tantalum units which are highly expensive. Tantaline® uses Chemical Vapor Deposition technique to deposit a thin tantalum surface layer onto the base material that provides superior performance in hot concentrated acids. Tantaline treatment being geometry independent process, there is no limitation while treating small bore parts, internal radii and crevices. The chemical compatibility of Tantaline treatment is similar to glass lining without having any geometry limitations. The Tantaline treated reactors remain passivated and inert to corrosion preventing fouling and cross contamination of process fluids, the characteristic most required by pharmaceutical industries.

Tantaline ® treatment can be effectively applied to a wide range of products including piping systems, valve assemblies, mechanical seals, ancillary equipment, agitators etc.

SUPERIOR CORROSION RESISTANCE FOR AGGRESSIVE SERVICE CONDITIONS

- ✓ Hydrochloric acid
- ✓ Sulfuric acid
- ✓ Acetic acid
- ✓ Nitric acid
- ✓ Sour gas (H_2S)
- ✓ Chlorine
- ✓ Many other process fluids