

Material list:

Body and bonnet: ASTM B381 F2

Seat: ASTM RPTFE

Ball: ASTM B381 F2

O-ring: CITON

Gasket: Graphite+SS316

Bolt: ASTM A193 Gr B7

Nut: ASTM A194 2H

Stem: ASTM MONEL K500

Application of titanium valve**1. Aerospace**

The high specific strength and corrosion resistance of titanium and titanium alloys provide a large space for application in the aerospace field. Only in terms of valve types, titanium valves are widely used in various passages on aircraft. Regulating valves, stop valves, check valves, needle valves, stopcock valves, ball valves, butterfly valves, etc., the titanium used for valves is abundant in pure titanium and titanium alloy Ti-6Al-4V.

2. Chemical industry

In chlor-alkali projects, salt industry, synthetic ammonia projects, ethylene projects, nitric acid projects, acetic acid projects and other projects involving strong corrosive media and environments, the corrosion resistance of common metals such as stainless steel, copper, aluminum, etc. is difficult to meet the requirements for use and must be used. For titanium alloys with better corrosion resistance, a large number of titanium valves must be used in the control and adjustment parts of the medium conveying pipeline.

3. Ship field

Russia is the first country in the world to develop titanium alloys for ships and one of the countries that has the most in-depth research. In the 1960s and 1980s, Russia produced a series of attack submarines, including the "Alpha" class with a titanium alloy usage of 3000t Submarines and "Typhoon"-class submarines that use 9,000 tons of titanium should replace titanium alloy conduits and titanium alloy valves in their seawater systems.

4. Nuclear power field

Since nuclear power plants are built along the coast, titanium valves are used in nuclear power projects due to their excellent seawater corrosion resistance. The types include safety valves, pressure reducing valves, stop valves, replacement valves, ball valves, etc.

In addition, titanium valve, as a fluid control necessity under a special medium and environment, is

also widely used in the paper industry, food and pharmaceutical manufacturing and other fields, and the future market is very broad.

Titanium and titanium alloy valves (hereinafter referred to as titanium valves) mainly have the following characteristics:

- Titanium valve not only has good corrosion resistance, but also has light weight and high mechanical strength.
- The titanium valve hardly corrodes in the atmosphere, fresh water, sea water, and high temperature water vapor.
- The titanium valve has good corrosion resistance in aqua regia, chlorine water, hypochlorous acid, wet chlorine and other media.
- Titanium valve is also very resistant to corrosion in alkaline media.
- The titanium valve has a very strong anti-chloride ion (Cl) ability and has excellent anti-chloride ion corrosion resistance.
- The corrosion resistance of titanium valves in organic acids depends on the acid's reducing or oxidizing properties.
- The corrosion resistance of titanium valves in reducing acids depends on whether the medium has corrosion inhibitors.

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