

Successful of 64 titanium ELI as a small-diameter pipe!

64 titanium-alloy “Ti-6AL-4V (-ELI)” is a titanium alloy containing 4% vanadium. In the medical field as a corrosion-resistant and biocompatible material Artificial bones and artificial joints, and aircraft, chemical plants, and automotive parts in the industrial sector its use has expanded to include 70% of titanium alloys.



■ Utilization of 64 Titanium ELI Small Diameter Pipes

■ 64 Titanium ELI Small Diameter Pipes Actual

64 titanium was said that machining was difficult and small-diameter pipe manufacturing was impossible.

In FUTA - Q, we have succeeded in making **64-titanium ELIs small-diameter pipes**.

SUS316L Improvement of corrosion resistance of medical instruments in contact with the human body and installation of equipment various applications are possible, such as reducing the weight of SUS pipes.

O.D. φ2.8 x I.D. φ1.6 x 280 mm long



※ Inspection results	Titanium 64ELI	SUS316L Hardened timber	Pure titanium (Class 2)
Tensile strength	1058 MPa	1064 MPa	483 MPa
0.2% proof stress	879 MPa	803 MPa	333 MPa
Vickers hardness	390 HV	365 HV	144 HV
Density	4.42 g/cm ³	7.9 g/cm ³	4.51 g/cm ³

[Vacuum heat treatment apparatus]



With our strengths in heat treatment technology as well as **vacuum heat treatment** equipment

Long length introduced to suppress surface oxidation under high vacuum atmosphere **Ultra-high temperature 1200°C heat treatment of pipes became possible.**

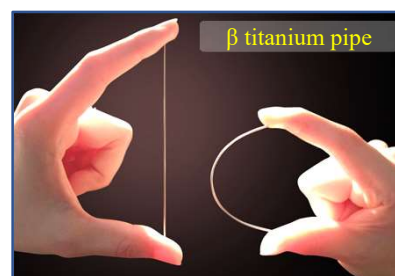
Equipment specifications

- Ultimate vacuum: $\times 10^{-4}$ Pa
- Unit core length: $\times 2.8$ m

[Heat treatment, volumetric treatment, and aging treatment of titanium alloys]

Features not found in SUS316L of **Titanium alloy** is possible to aging treatment. The material is heated to a high temperature, the metal is volume, and then cooled slowly.

Of various properties by quenching or changing heat treatment conditions **Titanium alloys** can be manufactured.



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