

Wires Made of “Super-elastic Shape-memory Alloy” Functioning in Various Fields

1. Wires of super-elastic shape-memory alloy can

Super-elastic shape-memory wires made of nickel-titanium alloys are often used in medical devices such as catheters and guidewires. In accordance with its name, these wires are extremely elastic and can be given complex, three-dimensional shapes through shape memory processing. They are used in treatments such as endovascular treatment in which inserted through a tiny blood vessel in a shrunk shape into small size, and expands the vessel once it reaches the affected area. We can design the shape to meet your requirements and handle everything from the prototyping to mass production.

2. Manufacturing processes of super-elastic wire products

- Shape determination in 3D design

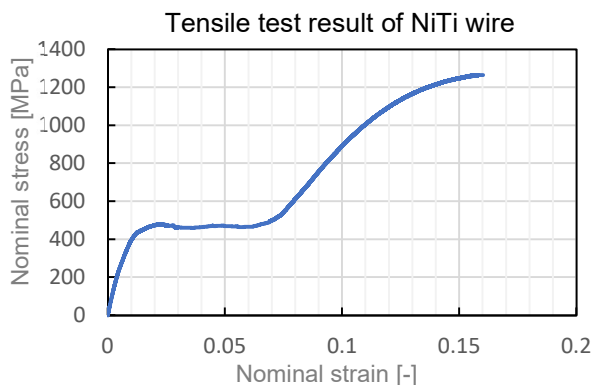
We digitize the complex three-dimensional shape using 3D-CAD system to put a client's conceptual shape into a tangible form in the designing stage. We will concretize an intangible image of the product in your mind through consulting.

- Memory shaping process

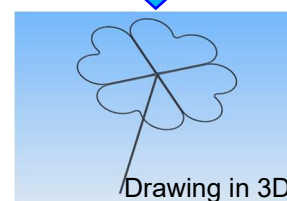
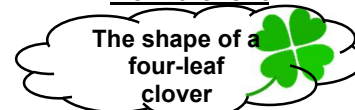
We can provide integrated services from design to fabrication, including making the jigs and molds necessary to manufacture the product. For producing the product imaged in your mind, the appropriate process and process conditions are designed by our engineers.

- Evaluation of the properties

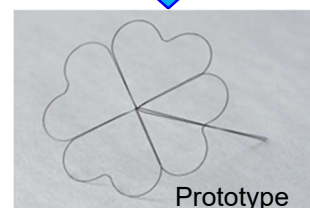
Upon request, property verification test can be performed to confirm the properties of the finished product. This test can include the evaluation of elastic elongation and tensile strength by a tensile tester, and the transformation temperatures using thermal analysis techniques.



A request example from a client



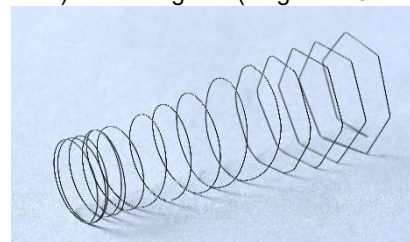
Process design



NiTi wire of $\Phi 0.2$ mm
Product OD of 45 mm

Property evaluation

Processed example: NiTi wire of $\Phi 0.2$ mm
Circle ($\Phi 12$ mm) \rightarrow Hexagonal (diagonal 16 mm)



FUTA-Q Co., Ltd.

URL <https://futaku.co.jp>

E-mail futaku-info@futaku.co.jp

[Headquarters]
33-3 Karahashi-keiden-cho, Minami-ku, Kyoto
City, Kyoto Pref. 601-8454
Tel: +81-75-661-2931

[Tokyo Office]
Mitaka-myajo-palace 3F,
1-1-3, Kamirenjaku Mitaka-shi,
Tokyo 181-0012, Japan
Tel: +81-422-27-7629