

PRECISION ETCH & FORM

TECH ETCH specializes in photo etching parts from difficult to etch specialty materials, such as Elgiloy, Titanium, Polyimide and Nitinol, which have characteristics attractive to the medical industry for implants, springs, cathodes, blades, and stents. Parts can be made from metals as thin as .0005".

Tech Etch also photo etches parts from other metals such as Copper Alloys, Tungsten, Molybdenum, Stainless Steels, Aluminum, Nickel Alloys and Spring Steels. Photo etching offers the flexibility of manufacturing prototype quantities to large production runs while maintaining tight tolerance without the high tooling costs and long lead times associated with stamping.

In addition to photo etching, Tech Etch offers a wide variety of in-house capabilities including laser cutting for thicker materials, forming, laminating, and stamping.

Formed parts are manufactured by combining photo etching, used for blanking, with inexpensive or universal tooling, used for forming. Heat treatment is available to enhance spring qualities.

Specialty Materials:

- Tungsten
- Niobium
- Molybdenum
- Nitinol
- Titanium
- Elgiloy
- Polyimide

PROPERTIES

TUNGSTEN & MOLYBDENUM

TUNGSTEN and MOLYBDENUM are difficult to etch refractory materials used for high-temperature, corrosion resistant applications.

NIOBIUM (Columbium)

NIOBIUM is a light weight refractory material with excellent high-temperature corrosion resistance. It is ductile and easily formed.

NITINOL

NITINOL (NiTi) is a shape memory alloy. Its unique characteristics allow it to return to a predetermined shape after undergoing deformation. NITINOL has excellent biocompatibility, good spring characteristics and high corrosion resistance.

TITANIUM

TITANIUM is strong, light weight and highly resistant to corrosion. Its strength is comparable to 304 stainless steel and it is used for human implants.

ELGILOY

ELGILOY is typically used when requirements call for a material that is highly corrosion resistant with high fatigue strength. It is used for human implants.

POLYIMIDE

POLYIMIDE is a film that exhibits good physical, chemical and electrical properties over a wide temperature range. Its electrical and chemical resistance properties are excellent even at unusually high temperatures.

