Induction Annealing Titanium fasteners

United Induction Heating Machine Limited

We are experienced in Induction Heating, induction heating machine, Induction Heating equipment. They are widely used in induction heating service, induction heat treatment, induction brazing, induction hardening, induction welding, induction forging, induction quenching, induction soldering induction melting and induction surface treatment applications http://www.uihm.com

Objective Heating a titanium fastener to 1100-1450°F (593-788°C) for an annealing process.

Material 0.06" (1.5mm) high zone on a titanium fastener measuring 0.163-0.375" (4.14-9.52mm) in diameter and 0.5-3.0" (12.7-76.2mm) in length

Temperature 1100-1450°F (593-788°C)

Frequency 125 kHz

Equipment • 25 kW induction heating system, equipped with a remote workhead containing one 0.66µF capacitor.

• An induction heating coil designed and developed specifically for this application. Process A three turn concentrator plate coil is used to heat the fastener for 0.2 seconds. This is an automated process that includes robotic placement of parts in the coil from a bowl fed track while Argon gas is flooded across the part to prevent oxidation.

The parts are processed at a rate of 1000 parts per minute. Results/Benefits Induction heating provides:

- Can be incorporated easily with pick and place robotics.
- Flameless process.
- Heating is limited to the specific area

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