

Induction Annealing an oval cut out on a stainless steel tube

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
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Objective To anneal a area around an oval cutout on a stainless steel tube prior to extrusion

Material: .75" (19mm), 1.5" (38.1mm) and 4" (101.6mm) diameter steel tubes

Temperature: 1900 °F (1038 °C)

Frequency: 50KHz

Equipment:

- UM-60AB-HF induction heating system, equipped with a remote workhead containing one 1 .0uF capacitor.
- An induction heating coil designed and developed specifically for this application.

Process: A single turn helical coil is used on the 4" (101.6mm) diameter tubes and a two turn helical coil is used on the smaller diameters. The coil is placed over the oval cutout and power is supplied for 15 seconds to anneal a .25 (6.35mm) diameter around the cutout.

Results/Benefits:

Induction heating provides:

- Precise and controllable placement of heat to anneal only the required area
- Faster process than flame
- Repeatable results
- Hands-free heating that involves no operator skill for manufacturing

4 inch (101.6mm) diameter tube heated

smaller diameter tube heated



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