

Induction Brazing copper tube & pipe

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 Braze brass fitting with o-ring to various diameters of copper tube.

Material Various copper tubes ranging from 3/8" to 7/8" diameter and 2-3' long, female brass fittings with o-ring, silver solder rings and glass beaker.

Temperature 1300 °F (704 °C)

Frequency 283 kHz for the 3/8" (9.6mm) diameter copper tube 250 kHz for the 7/8" (19.8mm) diameter copper tube

Equipment • Power of 20kW induction heating system, equipped with a remote workhead containing two 1.5 µF capacitors for a total of 0.75 µF

• An induction heating coil designed and developed specifically for this application.

Process A three turn 1.5" ID helical coil is used to heat the junction of the 3/8" (9.6mm) dia. copper tube and brass fitting. The brass fitting is placed on a ceramic mandrel in a beaker of water and half of the fitting is submerged in the water to protect the o-ring from melting. Heat is applied for 30 seconds, making the solder ring flow evenly creating a strong aesthetically pleasing bond without overheating the fitting. The 7/8" (19.8mm) dia. copper tube is brazed with a slightly larger three turn coil.

Results/Benefits Induction heating provides:

- Ability to direct heat only to the required zone
- Coil size and geometry allows for easy loading and unloading of finished parts
- Ability of coil to be used with water bath process allows for stability of the o-ring.

brazing-copper-tube

service@uihm.com

United Induction Heating Machine Limited

