## Induction Brazing Brass Fitting to Copper Air Lines

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 To braze brass end-connectors to copper tubes used in aircraft assembly air lines

Material brass end connectors, copper tubes of different diameters

Temperature 1400 °F 750°C

Frequency 350 kHz

Equipment Power of 6KW induction heating system, including a three turn helical induction coil using two  $0.33\mu F$  capacitors (total  $0.66\mu F$ )

Process For smaller diameter parts, flux is applied to the entire part and the copper tube to brass joint is assembled using brazing preforms (allowing for the same amount of braze in each joint).

The assembly is placed in the coil and heated for 20-30 seconds reaching a temperature of 1400°F.

For larger copper tube assemblies, the same process is used, but the braze alloy is stick-fed to the joint to prevent the alloy from flowing out of the joint.

A foot switch control is recommended to enable better control of the process.

Results/Benefits Economy: Power is consumed during the heating only

Consistency: the results of braze joints are repeatable and uniform

Brazing-Brass-Fitting-to-line

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