Braze a stainless steel braided hose to copper elbow for flexible hosing

Objective Braze a stainless steel braided hose to copper elbows for a braided hose assembly.

Material Stainless steel braided hose 3/8" (9.5mm) OD, copper elbow 1/4" (6.3mm) OD, braze preform rings and black flux

Temperature 1400 ºF (760 ºC)

Frequency 267 kHz

Equipment
- Ambrell 2.0 kW induction heating system, equipped with a remote workhead containing two 0.33µF capacitors for a total of 0.66µF
- An induction heating coil designed and developed specifically for this application.

Process A two turn helical coil is used to heat the braided hose assembly. Braze rings are placed at the joint on the copper elbow and flux is applied to the entire surface of the assembly. The assembly is placed in the heating coil and the braze flows within 30-45 seconds. This creates a liquid and gas tight braze between the copper and stainless steel braided hose.

Results/Benefits Induction heating provides:
- Liquid and gas-tight braze
- Energy efficient heat in a minimal amount of time
- Controllable braze flow through the use of braze rings
- Even distribution of heating

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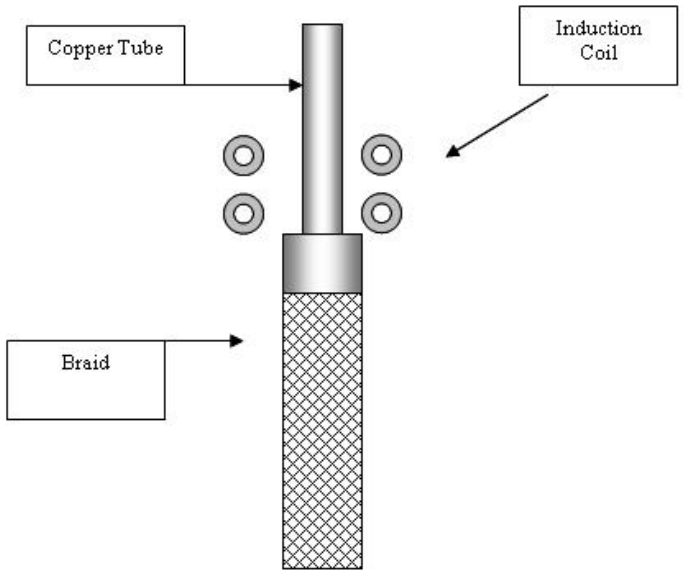

Diagram showing assembly in coil

Assembly in coil prior to heat application

Finished brazed hose and copper assembly

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