



Brazing a copper pipe seam assembly

Objective Heating a copper pipe assembly to 1350°F (732°C) for a brazing application.

Material Ambrell copper pipe, silver phosphorous braze pieces

Temperature 1350°F(732°C)

Frequency 216 kHz

Equipment

- Ambrell 8kW induction heating system, equipped with a remote workhead containing two 1.5μF capacitors for a total of 0.75μF
- An induction heating coil designed and developed specifically for this application.

Process A single position 2-turn pancake coil is used to generate the required heating for the application. A silver phosphorous braze is cut into small pieces and placed at each of 12 points that a junction is desired. The part is then placed under the coil and the power is turned on for 60 seconds to flow the braze.

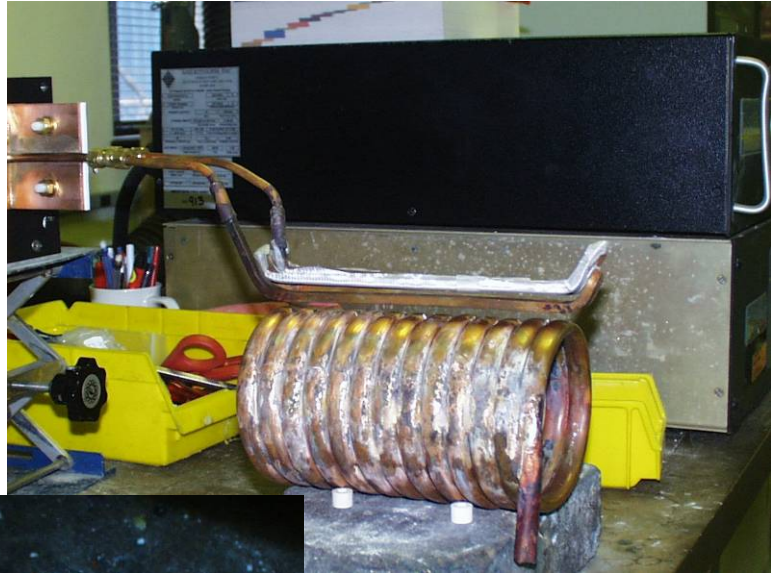
Narrative

- The customer is seam brazing copper pipes together. They will reduce the brazing of the seam down to 15-30 seconds. This customer is currently using a torch, but is not getting uniform quality, and hopes to improve on this. Also, it is dangerous for the operator.

Results/Benefits Induction heating provides:

- Reliable, repeatable aesthetically pleasing braze joint
- Even distribution of heating
- Faster, repeatable and consistent results

**Profile of
copper pipe
assembly**



**Junction points where
brazing is placed**

**Power is turned on to
flow the braze**

