



Brazing temperature sensor assemblies

Objective Brazing various diameter temperature sensor assemblies

Material 0.188" (4.8mm) -0.25" (6.4mm) diameter assemblies and BAg 7 0.031"(0.8mm) OD brass wire

Temperature 1350 °F (732 °C)

Frequency 180 kHz

Equipment

- Ambrell 2.4 kW induction heating system, equipped with a remote workhead containing two 0.66µF capacitors for a total of 0.75 µF.
- Induction heating coil designed and developed specifically for this application.

Process A five-turn two-position helical coil is used for this brazing application. Each coil acts individually and the coils are not designed to heat simultaneously. The diameter of the assembly determines which coil diameter is used. Each part is heated within a 30 second cycle time. Each part is heated with a different cycle time and power setting to create the brazed joint.

Narrative This customer is currently using an acetylene torch for this application. The customer would like to use induction to produce consistent results and higher quality brazed joints.

Results/Benefits Induction heating provides:

- Consistent and repeatable results
- High quality brazed joints
- Hands-free heating that involves no operator skill for manufacturing
- Reduced energy consumption
- Even distribution of heating



0.188" (4.8mm) OD probe in smaller diameter coil for brazing



0.25" (6.4mm) OD probe in larger diameter coil for brazing