



Heat aluminum for brazing an automotive assembly

Objective Heat aluminum for an automotive brazing application

Material Aluminum tubing 0.50 (12.7mm) dia, an aluminum boss 1" (25.4mm) long, flux filled braze rings

Temperature 1200 °F (649 °C)

Frequency 270 kHz

Equipment

- Ambrell 3.5 kW induction heating system, equipped with a remote workhead containing one 1.0µF capacitors for a total of 1.0 µF
- An induction heating coil designed and developed specifically for this application.

Process A multi turn pancake coil is used to heat the joint between the aluminum tubing and boss. The joint heats to temperature in 1.5 minutes and the braze ring melts forming a clean brazed joint.

Results/Benefits Induction heating provides:

- Hands-free heating that involves minimal operator skill for manufacturing
- Flameless application
- Reliable, repeatable aesthetically pleasing braze joint
- Even distribution of heating



Coil in position for brazing joint