



Brazing a base assembly for a pressure switch

Objective Heating a copper assembly to temperature for a brazing application

Material Customer supplied brass base, 1.46”(37mm.) outer diameter, 0.45”(11mm.) long, brass connector 0.31”(8mm.) inner diameter, 0.93”(24mm.) long, solder paste

Temperature 450 °F (232 °C)

Frequency 395 kHz

Equipment

- Ambrell 5kW induction heating system, equipped with a remote workhead containing two 1.5 μ F capacitors for a total of 0.75 μ F
- An induction heating coil designed and developed specifically for this application.

Process A single position pancake style coil is used to generate the required heating for the application. Solder paste is applied to the assembly around the joint area. The part is then placed underneath the coil and into the customer supplied fixture. This part is heated in approximately 12 seconds and reaches the temperature flowing the solder.

Narrative

- The customer is going to need to solder 2 parts (base and connector) together in 8-10 seconds.

Results/Benefits Induction heating provides:

- Hands-free heating that involves no operator skill for manufacturing
- Even distribution of heating
- Precise, controllable heat

**Brass base
with brass
connector and
solder paste**



**Brass base with brass
connector and solder
re-flowed**