

## Brazing Oil Suction Assembly with Copper Ring

**Objective** To heat an oil suction assembly (steel tubing and filter cap) to 1,850°F (1010°C) within 15 seconds for a brazing application.

**Material** 0.125" (3.2mm) diameter steel tube and filter cap assembly, high temperature brazing flux, copper ring.

**Temperature** 1850°F(1010°C)

**Frequency** 281 kHz

**Equipment**

- Ambrell 3.5kW induction heating system equipped with a remote workhead containing 0.66  $\mu$ F capacitors
- An induction heating coil designed and developed specifically for this application.

**Process** A two-turn, specially-contoured helical induction coil is used to heat the tube assembly near the joint area. A copper ring and high temperature flux are then applied to the joint area. Power is applied for 15 seconds until the braze flows.

**Results/Benefits** Induction heating provides:

- Easy loading and unloading of parts
- Heat very precise areas within production tolerances
- Hands free heating that involves minimal operator skill for manufacturing

