

Brazing a Steel Tube with External Wire Braid

- Objective:** Heat a magnetic steel tube and external steel wire braid for a brazing application
- Equipment:** Ambrell EASYHEAT[™] 2 kW, 150-400 kHz induction heating system with a workhead and coil specifically designed for this application
- Frequency:** 296 kHz
- Material:** Magnetic steel tube (7/8"/22 mm OD), steel wire braid and braze shim material
- Temperature:** 1400 °F (760 °C)
- Testing:** A specially designed single position, three-turn coil was used for this application. Initial tests were conducted to optimize the power delivered to the part. The coil selected is not only capable of heating the 7/8"/22 mm tube, but also a smaller tube that the client needs to heat.
- Testing concluded that the EASYHEAT can heat the part to 1400 °F (760 °C) within 20 seconds.
- Benefits:**
- **Speed:** The client requested a system that would meet their time objectives which the 2 kW EASYHEAT easily did, boosting the client's throughput
 - **Footprint:** An EASYHEAT and a workhead requires a minimal footprint, saving the client floor space compared to heating alternatives
 - **Integration:** The compact EASYHEAT can be easily integrated into the client's manufacturing process



The magnetic steel tube at temperature showing a dull red glow.