

Brazing a Nickel Pin and a Nickel Wire

- Objective:** To braze a nickel pin and a braided nickel wire; the end-product is a heater assembly and the client had been using flame heating
- Equipment:** Ambrell EASYHEAT[™] 2.4 kW, 150-400 kHz induction heating system with a workhead and coil specifically designed for this application
- Frequency:** 256 kHz
- Material:** Nickel pin, braided nickel wires
- Temperature:** 1500 °F (816 °C)
- Testing:** A custom-designed single position multiple-turn U-coil was built to generate the required heating for the application. The pin and wire were both coated with high temperature black flux. It took 25 seconds to heat the sample to temperature and create the brazed joint.
- Benefits:**
- **Repeatability:** The client can expect the same result every time with an Ambrell induction heating system, increasing quality when compared to the results they were seeing from inconsistent torch heating
 - **Safety:** Induction has no open flame, a large advantage when it comes to safety and not introducing unnecessary heat into the work environment
 - **Speed:** Induction quickly and precisely heats their assembly, increasing throughput
 - **Footprint:** The EASYHEAT 2.4 kW system has a small footprint, so it easily fits into their workflow



The brazed joints from this application.