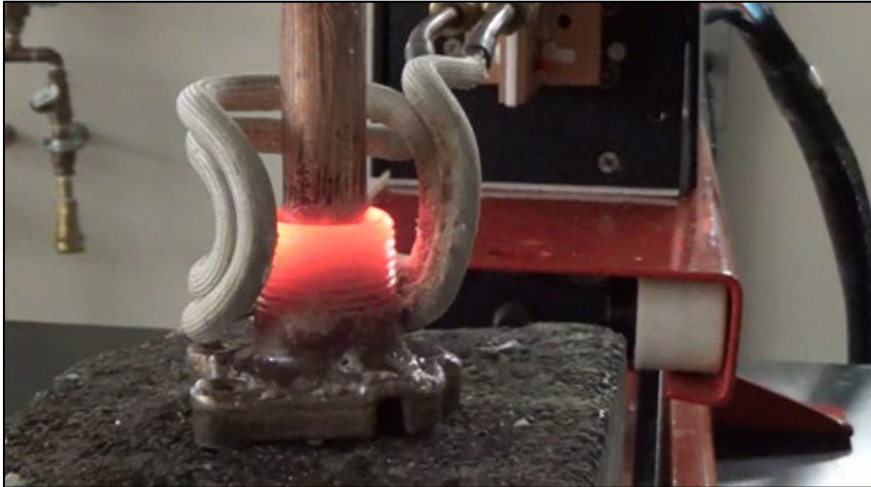


Application Note

Brazing Copper and Brass Fittings to Make a Flange

- Objective:** To braze copper and brass fittings; the client is switching from a torch and the end-product is a plumbing flange.
- Equipment:** Ambrell EASYHEAT™ 9 kW, 150-400 kHz solid state induction power supply with a workhead and coil specifically designed for this application.
- Frequency:** 224 kHz
- Material:** Brass, copper
- Temperature:** 1200 °F (649 °C)
- Testing:** A custom-designed single position multiple-turn u-coil was built to generate the required heating for this brazing application. Initial tests were conducted to optimize the power delivered to the part. Temperature indicating paint was then applied, which dissolves when the part reaches the target temperature. It took 70 seconds to heat the part to temperature.
- Benefits:**
- **Speed:** Induction met the client's time requirements and is often faster than other heating methods.
 - **Repeatability:** The client can expect the same result in the same amount of time every single time with induction heating, which was a primary reason this client was looking for an alternative to a torch.
 - **Work Environment:** With induction there is no open flame and with induction's instant on/off capabilities, it introduces less heat into the work environment.



The assembly during heating.