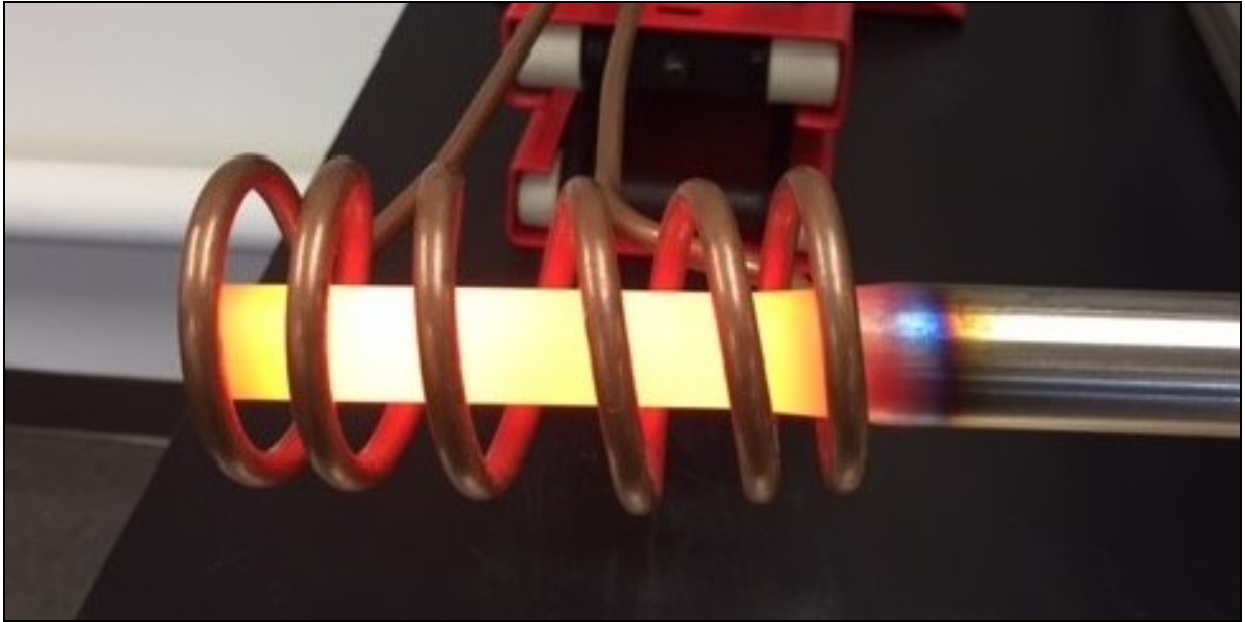


## Annealing a Stainless Steel Tube

- Objective:** To heat a stainless steel tube for an annealing application for a tubing manufacturer
- Equipment:** Ambrell EASYHEAT<sup>™</sup> 10 kW, 150-400 kHz induction heating system with a workhead and coil specifically designed for this application
- Frequency:** 225 kHz
- Material:** Stainless steel tube (0.8"/20.3 mm OD)
- Temperature:** 1900 °F (1038 °C)
- Testing:** A custom-designed single position multi-turn helical coil was built to generate the required heating for the application. Temperature indicating paint was then applied to the tube, which dissolves when the part reaches the target temperature. It took 45 seconds to heat the tube to the target temperature for this annealing application, which met the client's objective.
- Benefits:**
- **Repeatability:** The client can expect the same result every time with an Ambrell induction heating system, increasing quality
  - **Speed:** The client requested a system that would meet their time objectives which the EASYHEAT easily did
  - **Footprint:** An EASYHEAT and its workhead require a minimal footprint, saving the client valuable floor space compared to heating alternatives
  - **Safety:** The client wanted a precise, flameless heating method for their new application, which induction is
  - **Expertise:** The client wanted a partner to help them take a concept to a working prototype, which THE LAB was able to do.



The stainless steel tube being heating by the Ambrell EASYHEAT in THE LAB.