Ambrell
INDUCTION HEATING SOLUTIONS
an inTEST Company

Application Note

Heating a Copper Assembly for Soldering

Objective: To heat a glass feed-through inside a copper block for a soldering application, one side at a time. This was a new application/process for the client.

Equipment: Ambrell EASYHEAT™ 4.2 kW, 150-400 kHz solid state induction heating power supply with a workhead and single position multiple-turn split helical coil specifically designed for this soldering application.

Frequency: 294 kHz

Material:

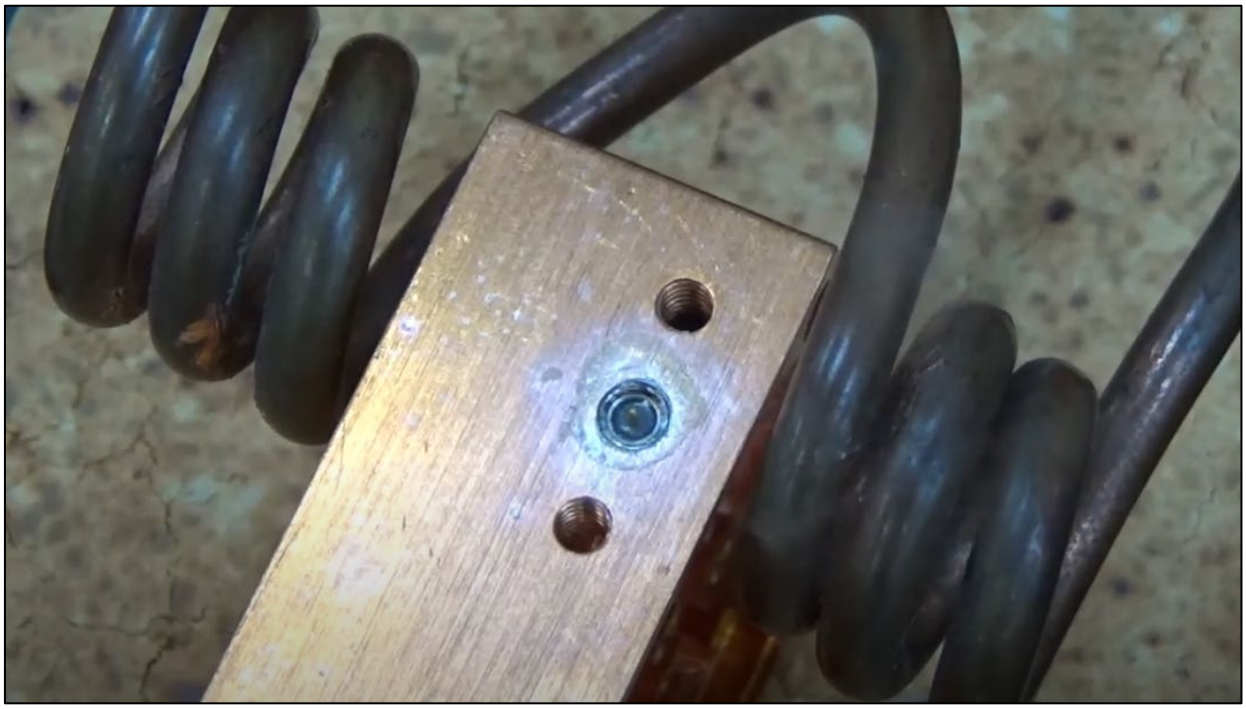
- Copper block/glass feed through

Temperature: 361 ºF (183 ºC)

Testing: Initial tests were conducted to optimize the power delivered to the part. Temperature indicating paint was then applied to the part, which dissolves when the part reaches target temperature. It was observed that the part reached 361 ºF (183 ºC) within 40 seconds. The speed and end product met the client's objectives.

Benefits:

- Speed: Heating met the client's time objectives for the soldering application.
- Precise, repeatable heating: Induction is a highly repeatable process so the customer can expect the same result every time and isn't dependent on operator skill.
- Footprint: The EASYHEAT requires little floor space, making it an easy addition to this client's new process.



The copper block and glass feed-through during heating.