Ambrell
INDUCTION HEATING SOLUTIONS
an inTEST Company

Application Note

Heating a Copper Wire for Coating Removal

Objective: To heat a copper wire to enable removal of a polyamide coating; the client had been using resistive heating but wanted to evaluate induction.

Equipment: Ambrell EASYHEAT 6 kW, 150-400 kHz induction heating power supply with a workhead and coil specifically designed for this application.

Temperature: 1,000 °F (538 °C)

Frequency: 175 kHz

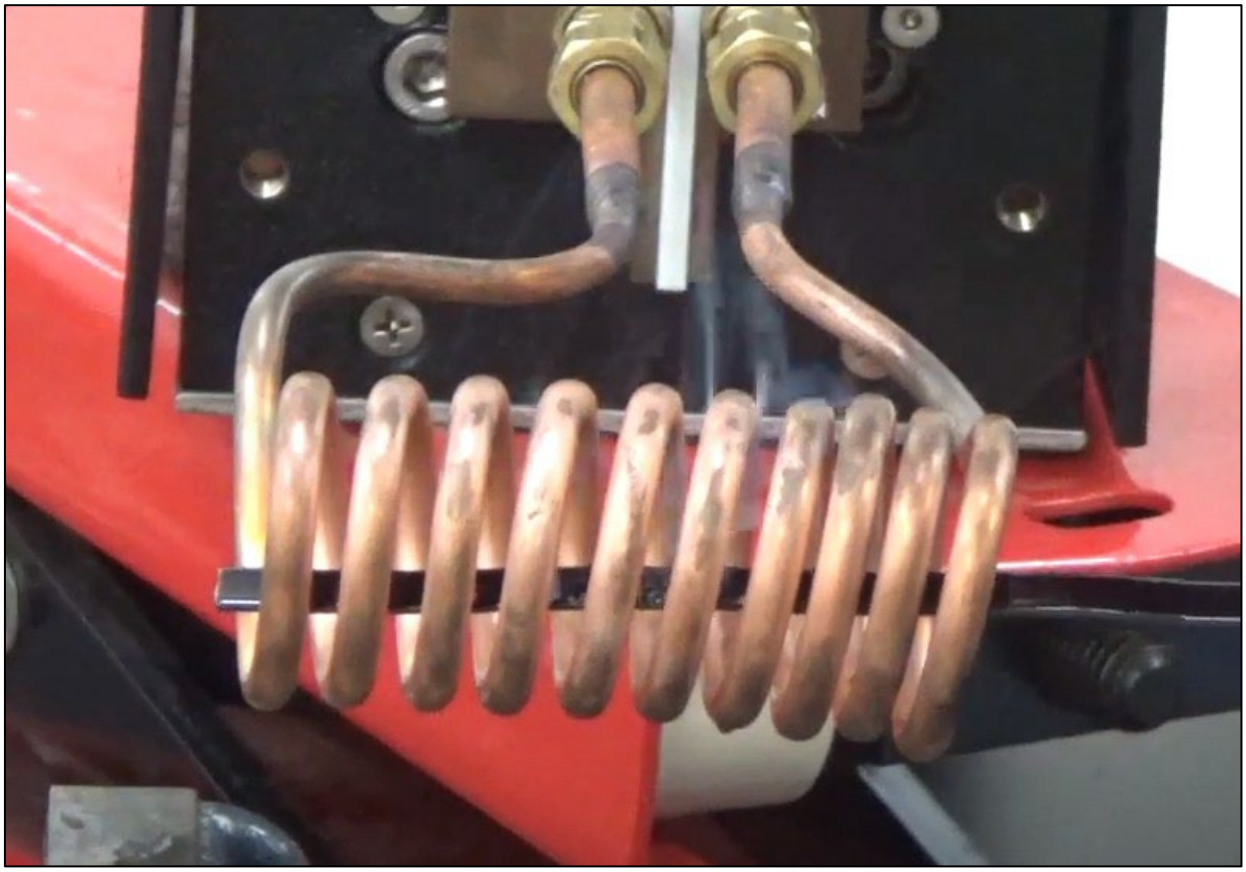
Material: Copper wire with a polyamide coating

Testing: A custom-designed multiple turn helical coil was built to generate the required heating for this coating removal application. Initial tests were conducted to optimize the power delivered to the wire. Application testing confirmed the viability of this wire heating application and heating took just a few seconds.

Benefits:

- **Repeatability:** Induction delivers the same result every single time, making it ideal for a high-volume application.
- **Speed:** Induction heats the wire up in seconds, resulting in throughput gains for the client.
- **Efficiency:** Induction is highly efficient with no ramp-up time.
- **Footprint:** Induction takes up a modest amount of floor space, especially when you consider that the workhead can be placed a distance away from the power supply.

1655 Lyell Ave, Rochester, NY 14606 USA • Tel: +1 585 889 9000 • Fax: +1 585 889 4030



The coated copper wire inside the helical coil during heating.