Annealing a copper wire connector (crimp)

Objective
Heating a copper wire connector to 1400 ºF (760 ºC) for an annealing application

Material
- Various copper wire crimps (connectors)

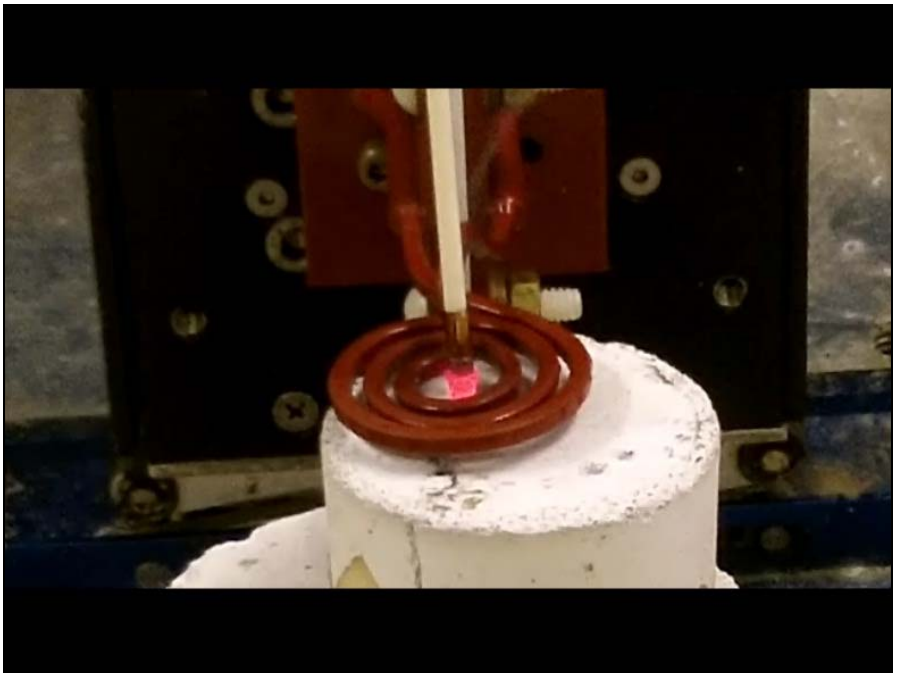
Temperature
1400 ºF (760 ºC)

Frequency
390 kHz

Equipment
- Ambrell EASYHEAT 8310 LI, 10kW 150-400 kHz induction heating system equipped with a remote heat station containing two 1.0 µF capacitors
- A single position three-turn pancake induction heating coil designed and developed specifically for this application

Process
After some coil testing, it was determined that the three-turn pancake coil was best for providing the right amount of heat to anneal the connector effectively. The wire connectors heated to temperature in 1.7 seconds or less.

Results/Benefits
- Speed: The proposed process met the client's time objectives
- Versatility: The client wanted to be able to heat parts of various sizes, which was achieved with a concentrator coil
- Lab expertise: Given that this is a new process for the client, Ambrell's lab expertise proved very valuable when creating the process



The connector inside the coil during heating