

Annealing ammunition casings

Objective To heat ammunition casings for shell annealing

Material • Ammunition casings (7.62 mm/0.3")

Temperature 1250 °F (677 °C)

Frequency 113 kHz

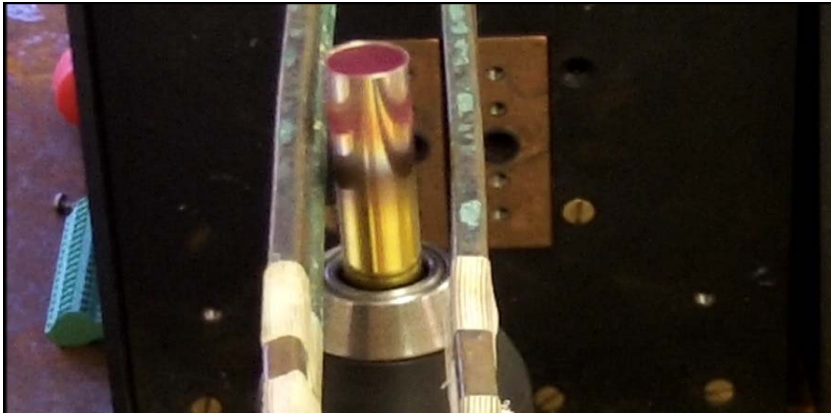
Equipment • Ambrell EKOHEAT 30 kW, 50-150 kHz induction heating system equipped with a remote workhead containing eight 1.0 µF capacitors for a total capacitance of 2.0 µF
• A single position two-turn helical induction heating coil

Process The coil, which is approximately 305 mm (12") long to enable several casings to be heated concurrently, is set up to simulate a production situation. A rotating device is used, which simulates the conveyor set up that will be present in production. With a three second heating time, 240 parts per minute can be annealed.

Results/Benefits • Speed: The client will be able to increase throughput when compared to their current torch heating process
• Repeatability: Induction offers the same result every time, while a torch often delivers variation
• Safety: There is no open flame with induction
• Ambrell Lab Expertise: The client leveraged the lab to come up with the right induction solution based on their specifications



The test set up, with the ammunition casing in a rotating device.



The ammunition casing in the coil during heating.