

Annealing a zinc wire prior to forming pellets for air rifles

Objective Annealing a zinc wire prior to forming a special high velocity air rifle pellet

Material Zinc wire 0.18" (4.5mm)dia

Temperature 572 °F (300 °C)

Frequency 253 kHz

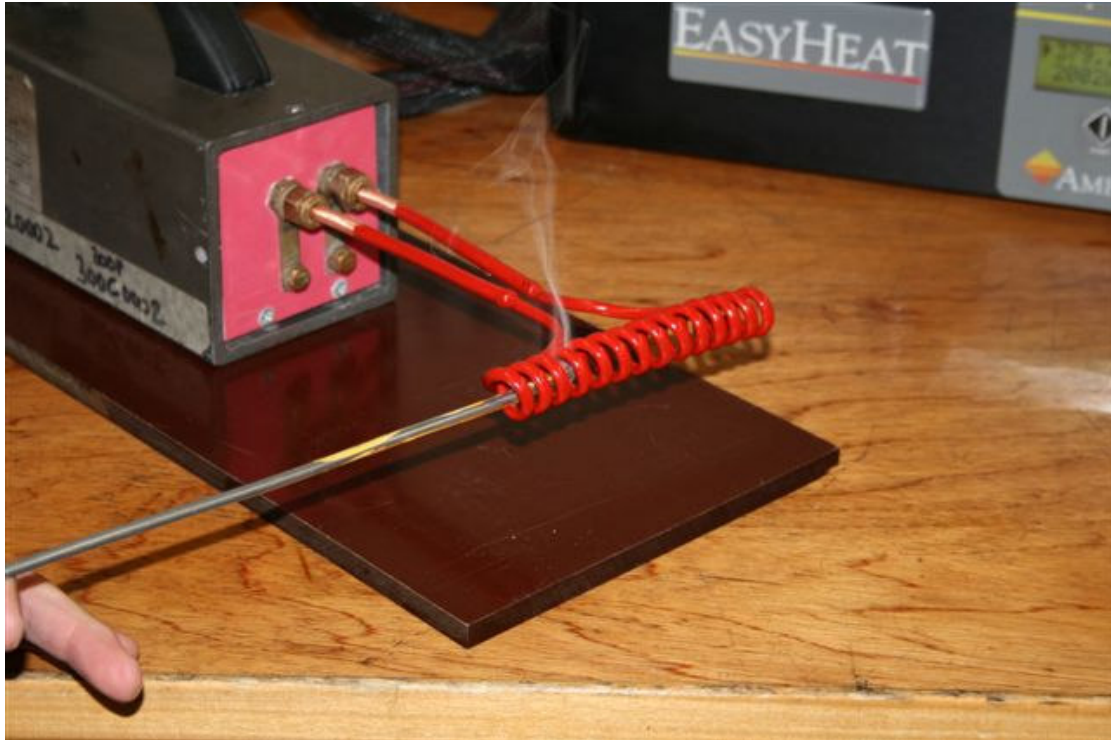
Equipment

- Ambrell 2.4 kW induction heating system, equipped with a remote workhead containing two 0.33 μ F capacitors for a total of 0.66 μ F
- An induction heating coil designed and developed specifically for this application.

Process A fourteen turn coil is used to heat 3.9" (100mm) of zinc wire. The wire is placed in the coil for 5 seconds to reach the desired condition just prior to the forming process.

Results/Benefits Induction heating provides:

- Reduces hardness of pellets to prevent damage to the forming dies
- Reduced production time
- High efficiency, low energy cost
- Fast and controllable heat
- Hands-free heating that involves no operator skill for manufacturing



Zinc wire being annealed in coil prior to forming