



Heating wire for hot heading

Objective To heat multiple steel wires to 1350°F (732°C) for hot heading application

Material Steel wire 0.185" (4.4mm) OD

Temperature 1350 °F (732°C)

Frequency 141 kHz

Equipment

- Ambrell 5.0 kW induction heating system, equipped with a remote workhead containing one 0.66μF capacitor
- An induction heating coil designed and developed specifically for this application.

Process A two turn channel coil is used to heat 12 wires at a time to reach the required 130 parts per minute. The wires are placed 0.5" (12.7mm) on center. The top 0.3" (7.6mm) of the wires are heated for 5 seconds to achieve the desired temperature.

Results/Benefits Induction heating provides:

- Hands-free heating that involves no operator skill for manufacturing
- Elimination of springback effect
- Extended die life
- Better grain flow and microstructure
- Even distribution of heating



Multiple wires heating in coil for hot heading