

Induction Case Hardening Shaft

United Induction Heating Machine Limited

We are experienced in Induction Heating, induction heating machine, Induction Heating equipment. They are widely used in induction heating service, induction heat treatment, induction brazing, induction hardening, induction welding, induction forging, induction quenching, induction soldering, induction melting and induction surface treatment applications
<http://www.uihm.com>

Case hardening shafts Objective Harden the gear end of an armature shaft to 58-65 Rockwell C at a depth of 0.02" (.51mm) on the center line of the teeth and to 49-55 Rockwell C at a depth of .010" (.3mm) on the center line of the root.

Material Steel armature shaft measuring 7" (177.8mm) in length with a gear diameter of approximately 1/2" (12.7mm).

Temperature 1700°F (926.7°C)

Frequency 140 kHz

Equipment • Power of 30kW induction heating system equipped with a remote workhead containing two (2) capacitors

totaling 0.5 μF

- 4-20 mA input simulator
- An induction heating coil designed and developed specifically for this application.

Process A five turn helical coil is used to heat the gear end of the shaft to 1700°F (926.7°C) for 2.5 seconds to achieve the desired hardness.

Results/Benefits Induction Heating Provides:

- Pin-point accuracy
- Maximum repeatability
- Faster cycle time

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