

Induction Hardening Teeth Of Gear

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>

Objective Hardening teeth on a steel motorcycle gear to a hardness of 48 – 55 HRC

Material Carbon steel gear 6.9" (175mm) diameter

Temperature 2000 °F (1093 °C)

Frequency 78 kHz

Equipment •Power of 90 kW induction heating system, equipped with a remote workhead containing eight 1.0µF capacitors for a total of 8µF

- An induction heating coil designed and developed specifically for this application.

Process A single turn helical coil is used to heat the gear. The gear is placed on a spindle and rotated at 300-350 RPM's. Heat is applied for 10 seconds to reach the desired hardness. The gear is immediately quenched to remove the heat, dried and then coated with a lubricant.

Results/Benefits Induction heating provides:

- Easy control of depth of hardness
- Energy savings due to efficiency of process
- Hands-free heating that involves no operator skill for manufacturing
- Even distribution of heating

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