Induction Shrink fitting impeller blades to 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.

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Shrink fitting impeller blades to shaft

Objective Heat aluminum impeller blades to 200 ºF (93 ºC) and shrink fit onto a shaft.

Material Aluminum impeller blades with a .28” (7.109mm) bore, aluminum shaft

Temperature 200 ºF (93 ºC)

Frequency 255 kHz

Equipment
• Power of 6 kW induction heating system, equipped with a remote workhead containing one 1.0μF capacitor.
• An induction heating coil designed and developed specifically for this application.

Process
A split two turn helical coil is used to evenly heat the opening on the impeller blade. The impeller blade is heated for 20 seconds to reach the 200 ºF (93 ºC). The impeller blades are then removed from the coil & slipped over the shaft to complete the shrink fitting application.

Results/Benefits
Induction heating provides:
• Repeatable results
• Reduced cycle time, lower consumables cost
• Even distribution of heating

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