

# Induction Hardening Surgical Knife Blades

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 Harden a 4" (101.6mm) section of a Stainless Steel surgical blade measuring 7" (177.8mm) long. Hardness should be 48 to 53 Rockwell C on the blade after processing.

Material 420 Stainless Steel Surgical Blades measuring 7" (177.8mm) long, 1/4" (6.35mm) wide at the shank, and 0.085" (2.2mm) thick at the blade.

Temperature 1850°F (1010°C)

Frequency 365 kHz

Equipment • Power of 4.5 kW induction heating system equipped with a remote workhead including one (1) capacitor equaling 1.2 μF

- An induction heating coil designed and developed specifically for this application. Process A two turn helical coil with an internal quartz tube designed to scan the length of the blade is used to heat the blade to 1850°F (1010°C) to achieve the desired hardness.

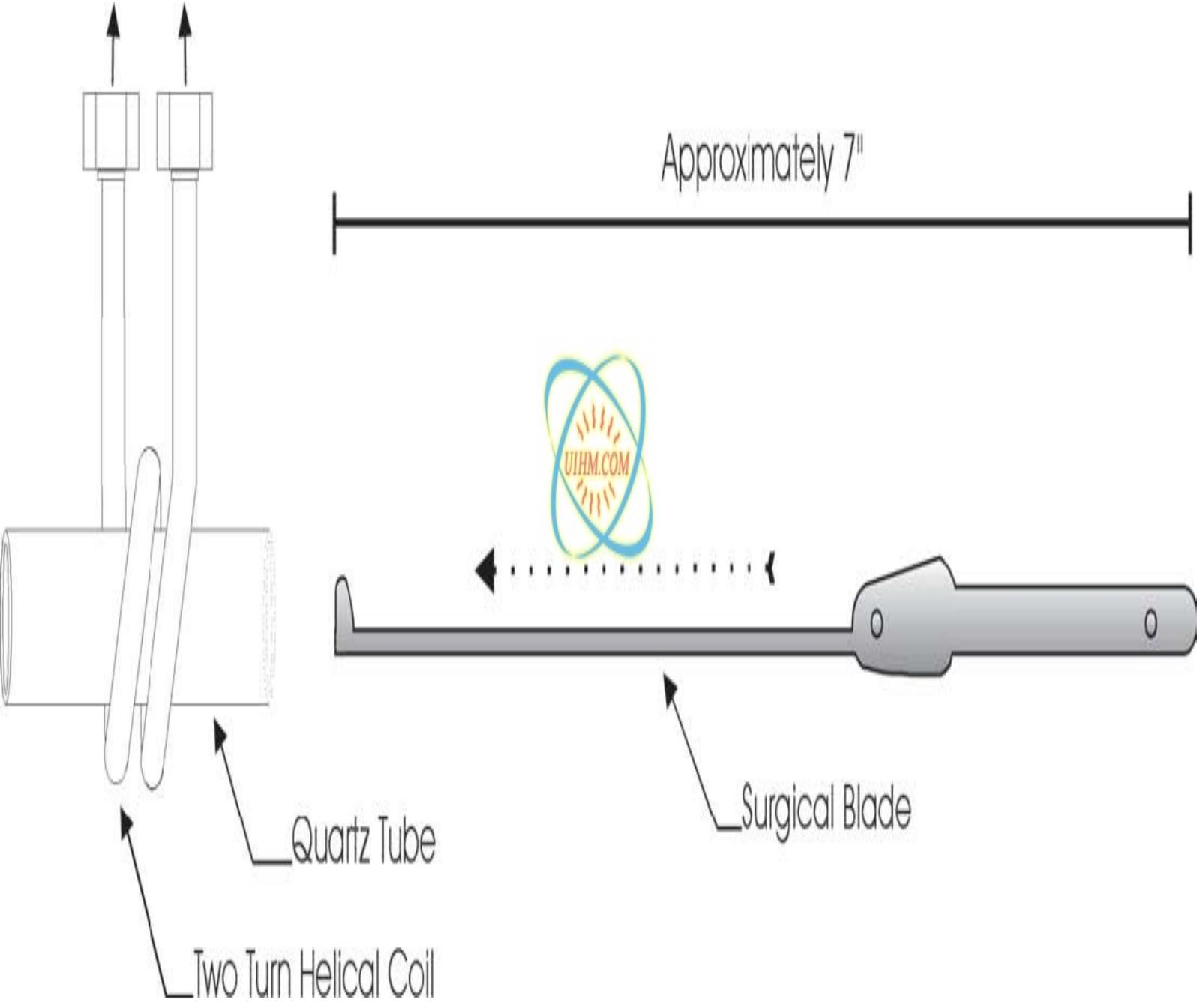
Results/Benefits Induction heating provides:

- Flameless process
- Improved production rate
- Consistent & repeatable results

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To Heat Station



Approximately 7"

Quartz Tube

Two Turn Helical Coil

Surgical Blade