

# Induction Annealing Tungsten Rods

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** To heat customer-supplied rods of various diameters (0.14 inch to 0.49 inch) to 4170°F (2300°C) at 2-4 feet per minute

**Material** Tungsten and Molybdenum; Tests are run in an atmosphere of Nitrogen or Hydrogen avoid oxidation of the materials.

**Temperature** 4170°F (2300°C)

**Frequency** 100 kHz

**Equipment** 90 kW, 50-150 kHz solid state induction power supply equipped with a remote heat station containing three, 6.6 mF capacitors for a total of 2.2 mF.

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

**Process** A multi turn induction heating coil is designed for heating the various rod diameters. An optical pyrometer is used to measure the temperature of the part inside the induction coil.

Initial static tests are conducted, then dynamic tests are run to confirm the results of the static tests.

**Results/Benefits** 90 kW system heats the rods to temperature at the rate specified. The rods are fixed lengths and are fed individually through the induction coil. The UIHM power supply automatically adjusts output to this varying load in the coil, allowing for an uninterrupted process



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