

Induction Brazing Diamond Drill

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 braze diamond inserts to a steel drilling ring

Material • steel ring and diamond inserts

- Braze shim preform
- Flux

Temperature 1300 – 1350 (700 – 730) °F (°C)

Frequency 68 kHz

Equipment Power of 35 kW, induction heating system, equipped with a remote heat station containing two 0.5 μ F capacitors (total 0.25 μ F) An induction heating coil designed and developed specifically for this application.

Process A multi-turn, internal-external helical coil is used to generate the required heating pattern. Initial tests on the ring alone determine system tuning. Flux is applied to the part and the braze shims are inserted into the counter-bored holes.

This is followed by the synthetic diamonds. The part is loaded into the coil and weight is placed onto the diamonds. RF power is applied until the braze flows. The power is turned off and the part air cools to room temperature.

Results/Benefits

- reduced ring warping compared to furnace heating
- decreased cycle time due to reduced ramp-up and cooldown times

Brazing Diamond Drill Show:

braze diamond inserts to a steel drilling ring 1

braze diamond inserts to a steel drilling ring 2

braze diamond inserts to a steel drilling ring 3



