

Induction Brazing steel orthodontic parts

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 a batch of orthodontic parts to 1300°F (704°C) within 1 second in an inert atmosphere for brazing.

Material Small stainless steel orthodontic parts, silver braze alloy, no flux, 3 1/ 8" (79.3mm) graphite susceptor disk with 1" (25.4) center hole and bell jar made of pyrex or quartz

Temperature 1300°F (704°C)

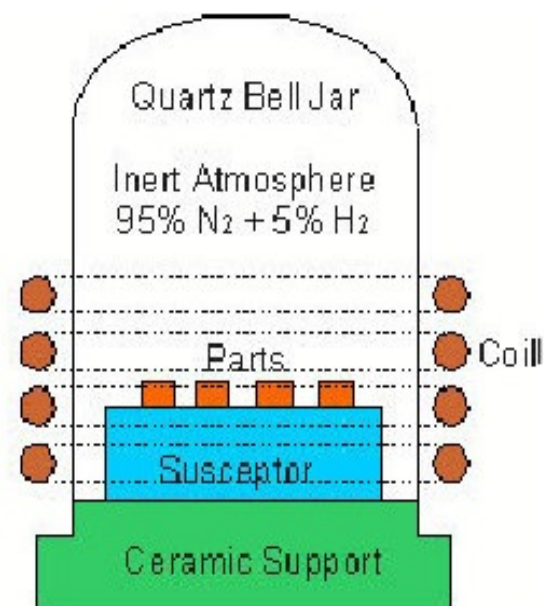
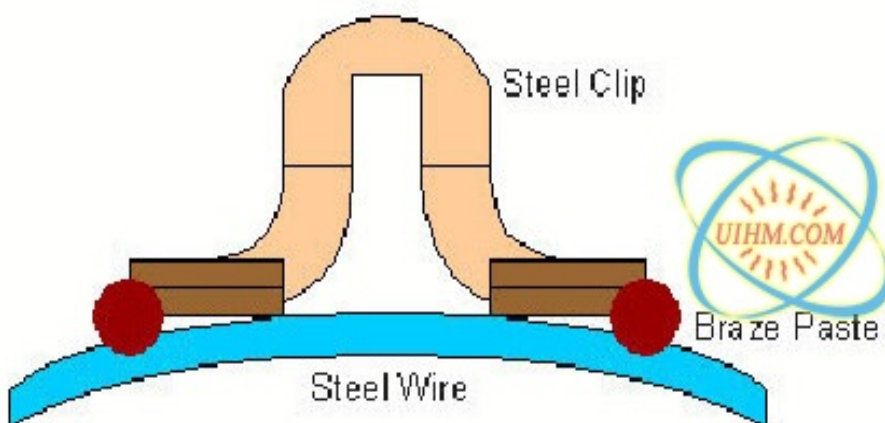
Frequency 165kHz

Equipment Power of 6KW induction heating system and 0.5 microfarad heat station

Process A four turn helical coil is used to heat parts. Brazing paste is applied to orthodontic parts with a syringe. The parts are placed on the graphite susceptor disk, which is placed on an insulating support in a quartz bell jar. After the jar is filled with inert gas, RF power is applied for 50 seconds at 165kHz to reach the required temperature, followed by a cool-down cycle.

Results/Benefits Induction heating provides:

- Fast, accurate, repeatable heat
- Ability to heat very small areas within precise production tolerances
- Better joint quality, reduced oxidation
- Increased production rates and reduced labor costs (100 parts are brazed in 50 seconds)



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