Brazing a heat-sensing probe

Objective To heat a coil and a wire assembly to 1300°F (704°C) within 60 seconds for brazing.

Material Platinum coil, steel wire, braze paste

Temperature 1300°F (704°C)

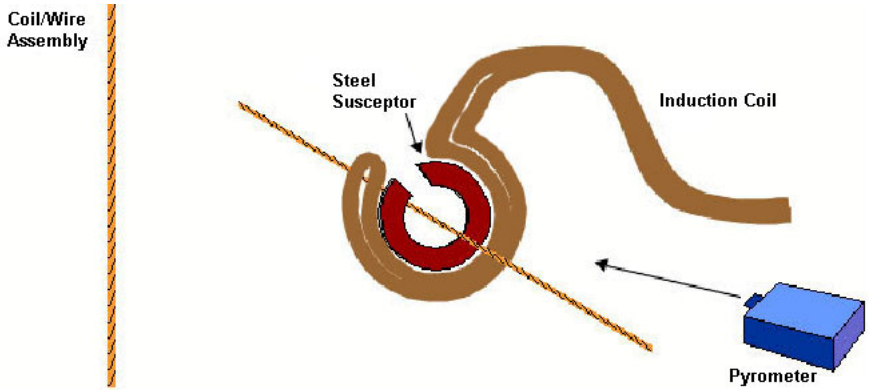
Frequency 307kHz

Equipment Ameritherm 1kW output, remote heat station containing one 1.2 microfarad capacitor, a specially-designed induction coil, an optical pyrometer, stainless steel susceptor, and zirconia felt to house the susceptor.

Process A C-shaped steel susceptor is used to ensure even heating and for ease of loading and unloading the samples. RF power from the power supply heats the susceptor to the required temperature of 1700°F (926°C) in 45 seconds. After braze paste is applied to the wire assembly, the assembly is placed inside the susceptor. It takes 3.5 seconds to heat the wire to the optimum brazing temperature of 1300°F (704°C) and the braze paste flows evenly and consistently.

Results/Benefits Induction heating provides:

- Fast, accurate, repeatable heat
- Ability to heat very small areas within precise production tolerances
- Better joint quality, reduced oxidation



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