

Brazing Steel-carbide Cutting Tool

Objective Provide a solution to this steel-carbide brazing application

- Material**
- Body 10mm; carbide tip 57 x 35 x 3 mm
 - Braze shim
 - Braze flux white

Temperature 750°C (1382°F)

Frequency 152 kHz

Equipment Ambrell 5 kW induction heating system, equipped with a remote heat station containing (2) 1.0 μ F capacitors (for a total of 0.5 μ F)
A 4.5" helical induction heating coil designed and developed specifically for this application.

Process The body shim and carbide are cleaned and braze flux as applied to the entire surface of the assembly. The parts are placed together in the induction coil. Two ceramic tubes are then placed thru the coil opposing each other to hold the parts during heating. The flux on the parts is allowed to dry before heating. The induction heating power is applied until the braze flows in the joint.

- Results/Benefits**
- targeted heating of the braze joint is efficient
 - flameless process is more precise, controllable
 - results are reproducible

