



## Brazing a copper pivot assembly

**Objective** Brazing a copper pivot assembly

**Material** Two copper uprights 2" (5cm) wide x 4" (10.2cm) high, copper base 3" (7.6cm) x 2" (5cm) and .5" (1.3mm) thick with 2 channels for the uprights to the slide into, braze shims and black flux

**Temperature** 1350 °F (732 °C)

**Frequency** 190 kHz

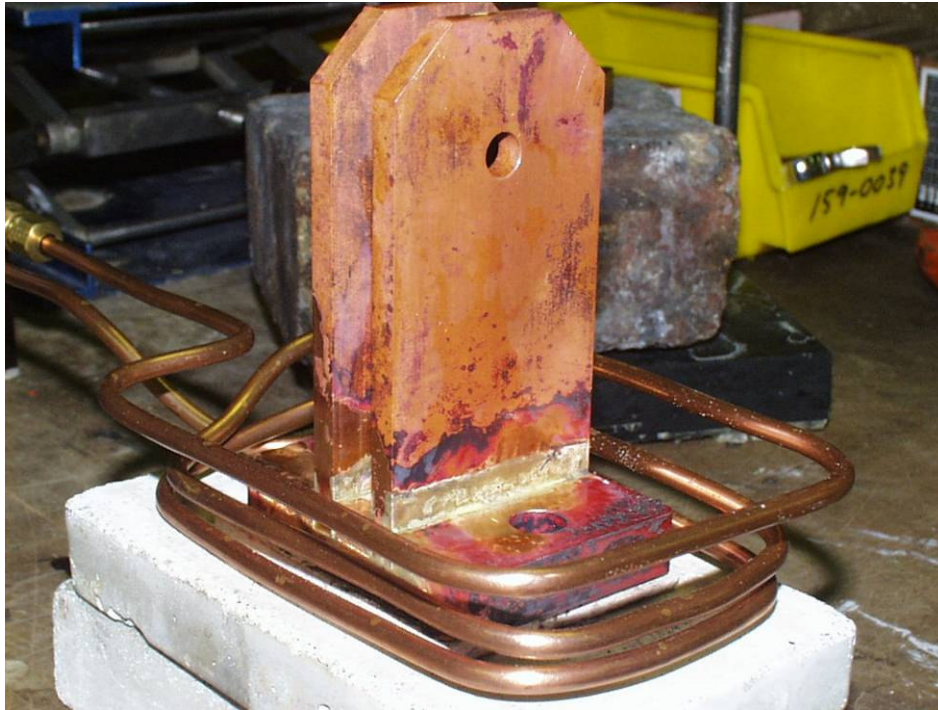
**Equipment**

- Ambrell 10 kW induction heating system, equipped with a remote workhead containing two 1.0µF capacitors for a total of 0.5µF
- An induction heating coil designed and developed specifically for this application.

**Process** A three turn helical coil is used to heat the base of the assembly. The copper uprights and two braze shims are placed in the grooves in the base and black flux is applied. The assembly is placed in the coil and power is applied for 4 minutes to braze both the uprights in place.

**Results/Benefits** Induction heating provides:

- Rapid localized heat which can minimize oxidation and reduce cleaning after joining
- Consistent and repeatable joints
- Hands-free heating that involves no operator skill for manufacturing
- Even distribution of heating



Pivot assembly in coil for brazing application