



## Braze four copper bus bars together

**Objective** To braze bus bar assemblies together

- Material**
- 2 copper bus bars 6" (152.4mm) wide, 2' (609.6mm) long, 2 copper bars 6" (152.4mm) wide, 18" (457.2) long & 3/8" (9.65mm) thick
  - braze shim preforms and white flux

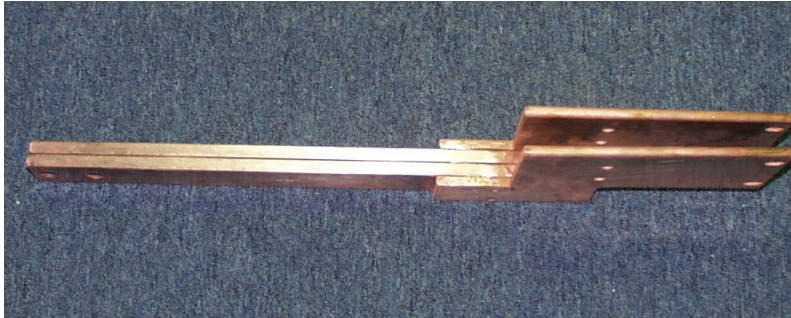
**Temperature** 1292 °F (700 °C)

**Frequency** 87 kHz

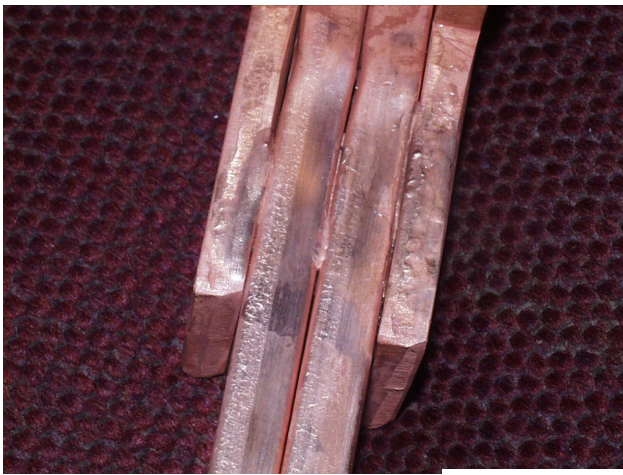
- Equipment**
- Ambrell 45 kW induction heating system, equipped with a remote workhead containing eight 1.0  $\mu$ F capacitors for a total of 2.0  $\mu$ F.
  - An induction heating coil, designed and developed specifically for this application

**Process** A three-turn helical coil is used to heat the assembly. Three braze shim preforms are placed between the plates and white flux is applied to the assembly. It is heated for 5 minutes to evenly flow the braze alloy. A high current capable, aesthetic looking braze zone is produced.

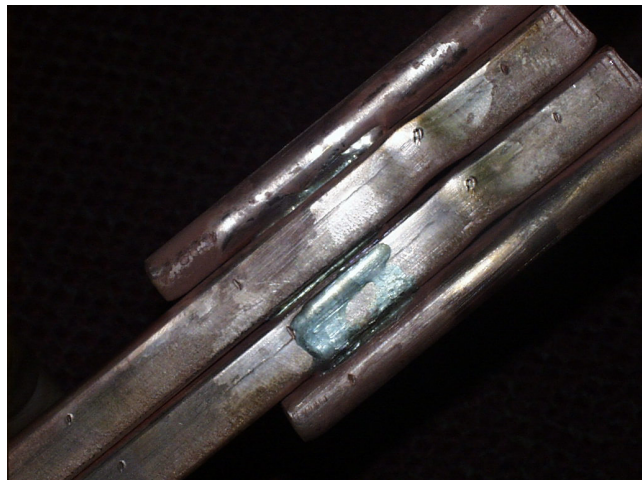
- Results/Benefits** Induction heating provides:
- Consistently produced, quality parts
  - Heat into the part that is divided equally between the copper pieces, allowing for even flow and consistent use of braze
  - Hands-free operation that doesn't require skilled operators



Completed bus bar assembly



Top of part



Bottom of part