**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 ºF (700 ºC)

**Frequency**
87 kHz

**Equipment**
- Ambrell 45 kW induction heating system, equipped with a remote workhead containing eight 1.0 µF capacitors for a total of 2.0 µF.
- 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