Soldering two copper wires to a copper buss bar

Objective
Soldering two copper wires to pre-installed turrets on a copper buss bar

Material
Solder dipped copper/nickel buss bar, 2 tinned stranded copper wires, brazing stick

Temperature
446 ºF (230 ºC)

Frequency
230 kHz

Equipment
• Ambrell 1 kW induction heating system, equipped with a remote workhead containing one 1.2µF capacitor.
• An induction heating coil designed and developed specifically for this application.

Process
A four turn split helical coil is used to solder the buss bar assembly. The 2 copper wires are applied to the turrets and power is applied for 30 seconds. The brazing stick is fed by hand to the heated parts and the braze flows evenly, creating the joint.

Results/Benefits
Induction heating provides:
• Reduced solder time
• Even distribution of heating
• Joint to joint consistency
Buss bar showing coil placement and wires soldered to turrets