



## Brazing Brass Ship Fittings for Repair

**Objective** To heat brass tubing assemblies to 750°C for a brazing application. The tubing diameter varies from 3 to 8 inches (76.2 to 203.2 mm)

**Material** Brass tubing  
Brass flange  
Braze rings  
Braze flux

**Temperature** 1382°F (750°C)

**Frequency** 100 kHz

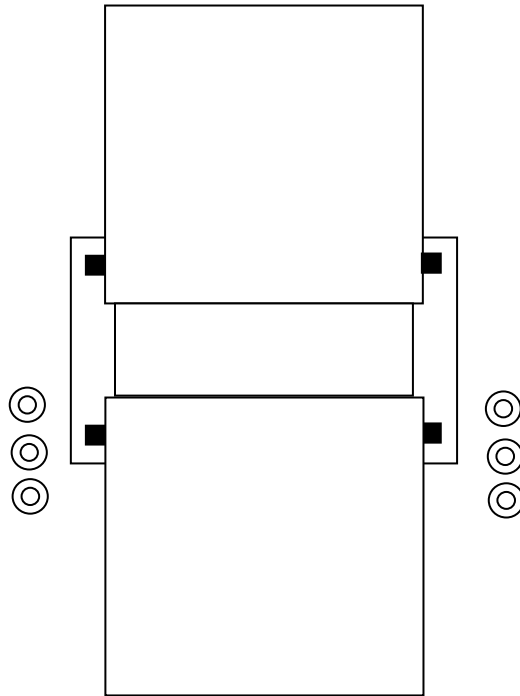
**Equipment** Ameritherm 20.0 kW, 50-485 kHz induction heating power supply, equipped with a remote heat station containing eight 1.0 µF capacitors (total 2.0 µF).  
A multi-turn helical coil induction heating coil designed and developed specifically for this application.

**Process** The parts are disassembled. All connections are cleaned and braze flux is applied to the entire surface of the assembly. Before assembling the parts an induction coil is slipped over the tube. The brass coupling is placed over the brass tubes. The flux on the parts is allowed to dry before heating. The induction heating power is applied until the braze flows well at the joint. The assembly heats well to 1382°F (750°C) and melts the braze alloy all around the tube. Heating time is several minutes depending on flange diameter.

**Results/Benefits** The coil allows heating at the best possible efficiency which reduces the cycle time and the conducted heat along the brass tubes.

Illustrations next pages

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