

## Plastic Reflow With Catheter Tubing

**Objective** Heat a metal braid in a plastic catheter tube to 250 °F (121.1°C) so that another catheter tube can be bonded to it.

**Material** 0.05" (1.27mm) diameter catheter tubes, some with a metal braid, ceramic rod

**Temperature** 250 °F (121.1°C)

**Frequency** 306kHz

**Equipment**

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

**Process** A single turn helical coil is used to heat the metal braid for plastic reflow. To maintain the correct inside diameter of the tubing. A ceramic rod is inserted through the tubing. Heat is applied for 3.5 seconds to reach 250 °F (121.1°C). The metal braid melts the plastic and creates a bond.

**Results/Benefits** Induction heating provides:

- Controlled rapid application of heat
- Consistent, repeatable results
- Energy efficient

