

## Annealing lip on aluminum cryogenic dewar

**Objective** Annealing a 1" lip on aluminum cryogenic dewar that has been work hardened during the process of spin forming.

**Material** Aluminum dewar, lip has a 3.24" (82.3mm) ID and is 0.05" (1.3mm) thick

**Temperature** 800 °F (427 °C)

**Frequency** 303 kHz

**Equipment**

- Ambrell 3.5 kW induction heating system, equipped with a remote workhead containing one 1.0 µF capacitor.
- An induction heating coil designed and developed specifically for this application.

**Process** A two turn helical coil is used to heat the lip on the cryogenic dewar. The dewar is placed in the coil and power is applied for 2 minutes to anneal the required 1" heat zone.

**Results/Benefits** Induction heating provides:

- Hands-free heating that involves no operator skill for manufacturing
- Fast, controllable, accurate heating
- High efficiency, low energy cost
- Even distribution of heating

\* dewar is a glass or metal container for storing liquefied gases



Temperature indicating paint shows the 1” heat zone annealed on the cryogenic dewar