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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

• 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
an arifically for this application.

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

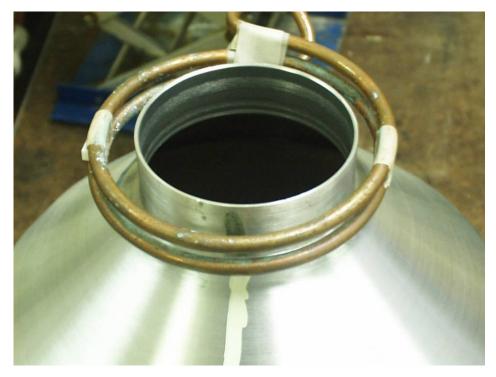
• High efficiency, low energy cost

Even distribution of heating

^{*} dewar is a glass or metal container for storing liquefied gases



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