

# Induction Sealing aluminum foil to plastic bottle

United Induction Heating Machine Limited

We are experienced in Induction Heating, induction heating machine, Induction Heating equipment. They are widely used in induction heating service, induction heat treatment, induction brazing, induction hardening, induction welding, induction forging, induction quenching, induction soldering, induction melting and induction surface treatment applications  
<http://www.uihm.com>

Objective To seal a 1.5" (38.1mm) diameter cap with foil to a plastic bottle.

Material 1.5" (38.1mm) diameter cap with 1.5" (38.1mm) diameter aluminum seal, plastic bottle

Temperature 250-300 °F (121-149 °C)

Frequency 309 kHz

Equipment • Power of 6kW induction heating system, equipped with a remote workhead containing two 0.66 µF capacitors for a total of 1.32 µF

- An induction heating coil designed and developed specifically for this application.

Process A single turn helical coil of rectangular tube is designed to uniformly heat the entire perimeter of the aluminum foil. In production the bottle will pass under the induction coil. For testing a silicon rubber is placed on coil then the aluminum seal is placed on the silicon rubber and heat is applied for .5 seconds. The bottle is placed on aluminum seal and pressure is applied causing the aluminum to seal to the plastic bottle.

Results/Benefits Induction heating provides:

- The coil design can be incorporated to fit a wide range of production setups.
- Hands-free heating that involves no operator skill for manufacturing.
- Ability to direct heat only to perimeter of aluminum foil

Sealing-aluminum-foil-to-plastic-bottle

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