

# Induction Heating aluminium susceptor

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  
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Heating aluminium susceptor Objective Expand powder into solid form for use in crash helmets

Material Microspheric powder

Aluminium chamber 110mm (4.3 in.) diameter x 35mm (1.3 in.) deep used to hold powder

Temperature 150 °C (302 °F)

Frequency 54.5 kHz

Process Time 20 seconds

Equipment . Power of 35 kW induction heating system, equipped with a remote workhead containing (4) 2.6  $\mu\text{F}$  capacitors (for a total of 2.6  $\mu\text{F}$ ).

. Two pancake coils 110mm (4.3 in) dia. with 45mm (1.8 in.) gap, in a headphone configuration designed and developed specifically for this application.

Process The bottom of the susceptor chamber is sprayed with a release agent and microspheric powder is added to the chamber. The chamber is heated for 120 seconds to reach 150°C (302°F) changing the powder into solid form. It is then allowed to air cool to 70°C (158°F) and removed from the chamber.

Results/Benefits Induction heating:

- . reduces cycle time for increased production
- . energy efficient only heating the part allowing small production runs
- . is very flexible allowing a variety of molds to be used

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