

Pre-heating aluminum wheels prior to spray painting

Objective This spray painting application requires pre-heating the material. Additionally, there is a requirement that the material must not cool below a certain target temperature prior to the spray.

Material Customer-supplied parts

Temperature 275 °F (135 °C)

Frequency 8 kHz

Equipment

- Ambrell EKOHEAT 75/10 kW induction heating system, equipped with a remote workhead containing three 27 µF capacitors for a total of 81 µF
- An induction heating coil designed and developed specifically for this application.

Process A multi-turn combination helical/pancake coil is used. The 22" aluminum wheel is inserted into the coil and heated for 30 seconds to a temperature of 275 °F. When heating is halted, the part remains at or above 150 °F for 108 seconds, fulfilling the target heat requirement

Results/Benefits Induction heating provides:

- Uniform heat distribution over the wheel
- Precise control of heating and pattern
- Efficiency; reduced energy costs

