

Curing plastisol adhesive on an aluminum filter assembly

Objective To Cure adhesive in aluminum filter ends

Material Aluminum filter, steel end caps & plastisol adhesive

Temperature 200 °F

Frequency 277 kHz

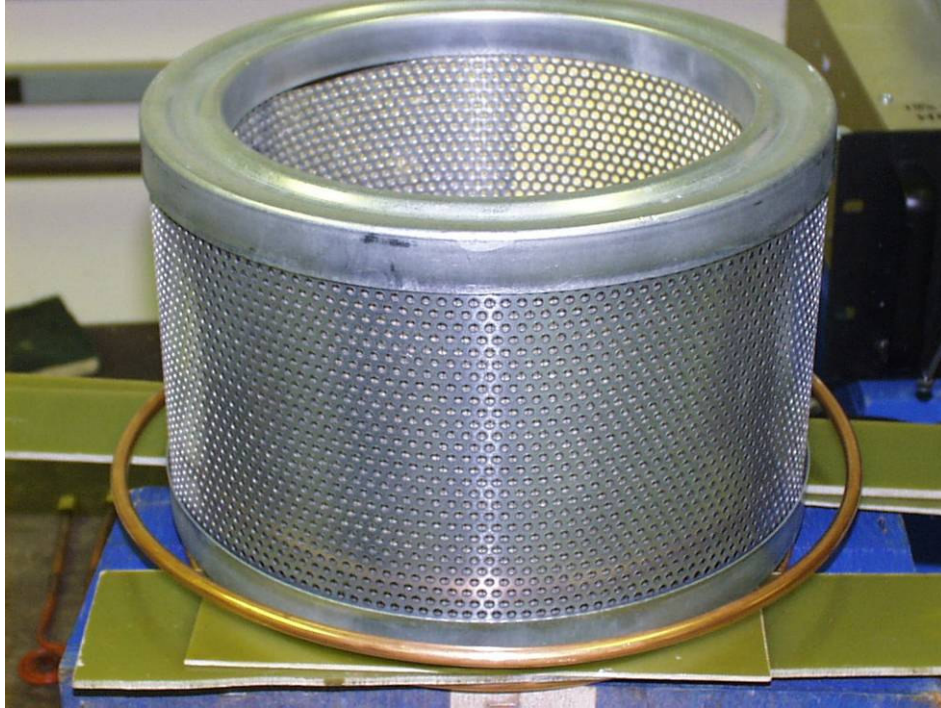
Equipment

- Ambrell 2 kW induction heating system, equipped with a remote workhead containing two 0.1 μ F capacitors for a total of 0.2 μ F
- An induction heating coil designed and developed specifically for this application.

Process A four turn helical coil is used to cure the plastisol adhesive. One filter end cap is filled with adhesive, attached to the filter and heated 90 seconds to cure the adhesive. The filter assembly is then flipped; the second end cap is filled with adhesive and applied to the filter. Heat is applied to that end cap for 90 seconds to cure the adhesive. A second coil is recommended to heat 2 parts at once which would reduce the heat time to 45 seconds per part. The heat time can be further reduced by increasing the number of power supplies and coils.

Results/Benefits Induction heating provides:

- Faster curing times, increased production
- Reduced energy cost
- Localized heating, no damage to adjoining components
- Decreased production losses (reduction of downtime and scrap)
- Reliable, repeatable heat



Curing one end of filter assembly