Curing plastisol adhesive on both ends of a filter assembly

Objective Curing plastisol adhesive on both ends of a filter assembly to create a bond between the filter and end caps

Material End caps 6" (152mm) in diameter, filter and plastisol

Temperature 450 ºF (232 ºC)

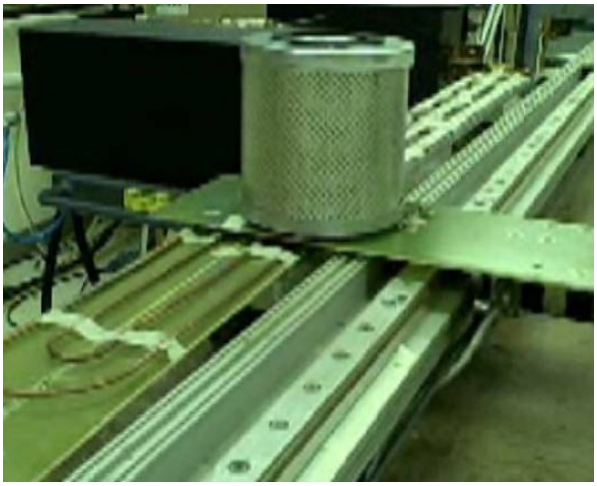
Frequency 74 kHz

Equipment
- Ambrell 30 kW induction heating system, equipped with a remote workhead containing eight 1.0µF capacitors for a total of 2.0µF
- An induction heating coil designed and developed specifically for this application.

Process A 5' (1.5m) zig zag shaped coil is used for this curing process. One end cap is filled with 4.3oz (128mL) of plastisol, the filter is placed in the end cap and the assembly is moved over the coil on a sled for a heat cycle of 6 minutes and 40 seconds. When the assembly reaches the end of the run the plastisol is cured. The assembly is flipped over and the 2nd end cap is filled with plastisol & the filter assembly is placed in the 2nd end cap. The compete assembly is then processed for another 6 minutes and 40 seconds to cure and bond both ends of the filter assembly.

Results/Benefits Induction heating provides:
- Improved distribution of heat
- Much faster cure time than heat plates previously used
- Much faster production rate
- Hands-free heating that involves no operator skill for manufacturing

End cap with cured plastisol



Filter assembly running over coil

Completed filter assembly