Curing epoxy on aluminum copier roller assembly

Objective Heat the end of an aluminum copier roller to 400 ºF (200 ºC) to cure epoxy

Material Aluminum roller 4.75” (120mm) diameter, 2’ (0.6m) long with 1.5” (38.1mm) thick plug at end

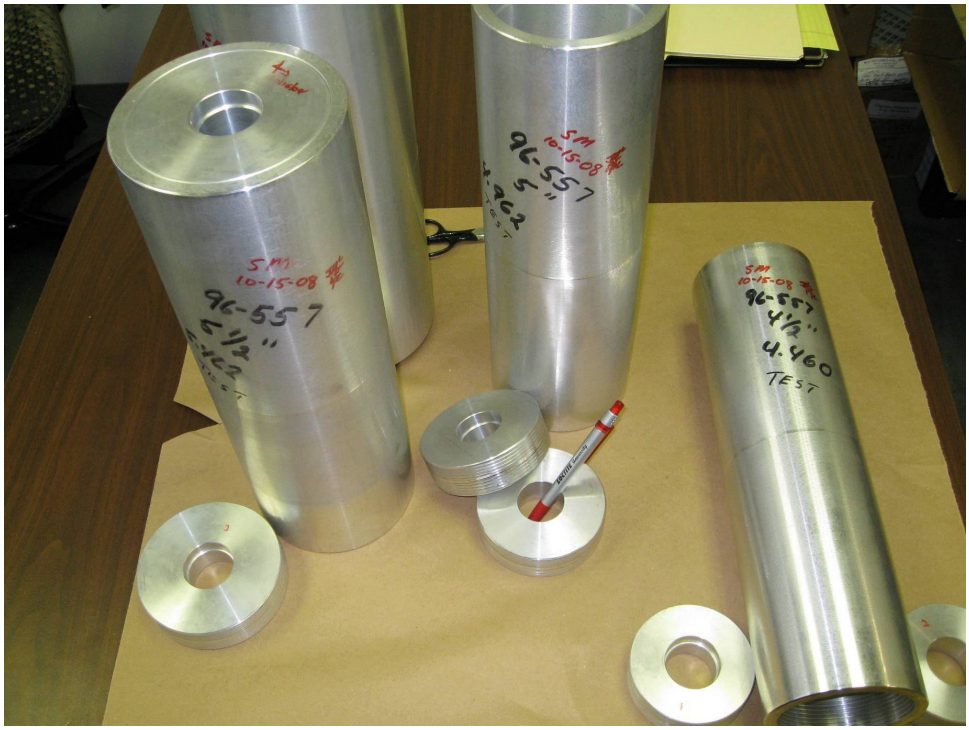
Temperature 400 ºF (200 ºC)

Frequency 112 kHz

Equipment
- Ambrell 15 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 four turn helical pancake coil is used to heat the end of the copier roller assembly. The assembly is heated 90 seconds to cure the adhesive.

Results/Benefits Induction heating provides:
- Faster process time
- Hands-free heating that involves no operator skill for manufacturing
- Even distribution of heat between tube and end plug



Aluminum rollers and end plugs prior to curing

Aluminum roller and end plug assembly in coil