Heating a pin assembly to cut holes in a rubberized material

**Objective**  Heating a pin assembly to cut holes in a rubberized material

**Material**  Metal disc 3.75" OD (95.25mm) with 72 pins .375" (9.5mm) long, .09735" (2.47mm) OD

**Temperature**  518 °F (270 °C)

**Frequency**  195 kHz

**Equipment**
- Ambrell 4.2 kW induction heating system, equipped with a remote workhead containing one 1.0μF capacitor.
- An induction heating coil designed and developed specifically for this application.

**Process**  A single turn channel coil is used to heat the disc. Power is applied and the disc rotates at 14 rpm’s to maintain a constant temperature of 518 °F (270 °C).

**Narrative**
- Customer is currently cutting holes in the rubberized material without heat and is having a problem with the pins sticking. By adding heat to the process the sticking is eliminated.

**Results/Benefits**  Induction heating provides:
- Precise and consistent application of heat
- Consistent and repeatable results
- Hands-free heating that involves no operator skill for manufacturing
Disc heating as it rotates in coil