## Heating threaded area of fastener

**Objective**  
To heat the threaded area of fasteners to 375°F (190.5°C) at a rate of 8000 parts per hour

**Material**  
Non magnetic threaded pins in a 0.03” (.76mm) thick steel plate, pins are 0.5 “ (12.7mm) apart center to center

**Temperature**  
375 °F (190.5°C)

**Frequency**  
235 kHz

**Equipment**  
- Ambrell 20.0 kW induction heating system, equipped with a remote workhead containing four 1.0μF capacitors for a total of 1.0 μF
- An induction heating coil designed and developed specifically for this application.

**Process**  
A single turn channel coil is used for this application. The threaded pins are placed in a stainless steel plate 0.5” (12.7mm) apart center to center. Twenty pins are heated for 10 seconds to reach 375 °F (190.5°C) at a rate of 8000 parts per hour.

**Results/Benefits**  
Induction heat provides:
- Localized only to the threaded area
- Increased production time
- Flameless process
- Even distribution of heating
Threaded pins in stainless steel plate passing through induction coil