Heating a steel steam trap for calibration testing

Objective To heat a steel steam trap to 212°F (100°C) to release steam for calibration testing

Material 1.4” (35mm) OD, 0.3” (7mm) thick steel disc that has water inside

Temperature 212 °F (100°C)

Frequency 293 kHz

Equipment • Ambrell 2 kW induction heating system, equipped with a remote workhead containing two 0.33 µF capacitors for a total of 0.66 µF
• An induction heating coil designed and developed specifically for this application.

Process A four turn pancake coil is used to heat the bottom of the steel steam trap to 212°F (100°C). After 10 seconds the water inside will reach 212°F (100°C) and a ball bearing will release steam created from the water inside and allow for calibration testing.

Results/Benefits Induction heating provides:
• Repeatability and consistency
• Even distribution of heating
• A faster process time, saving time and energy
Bottom of steam trap that is heated

Top of steam trap with temperature reactive paint

Four turn pancake coil used to heat bottom of disc