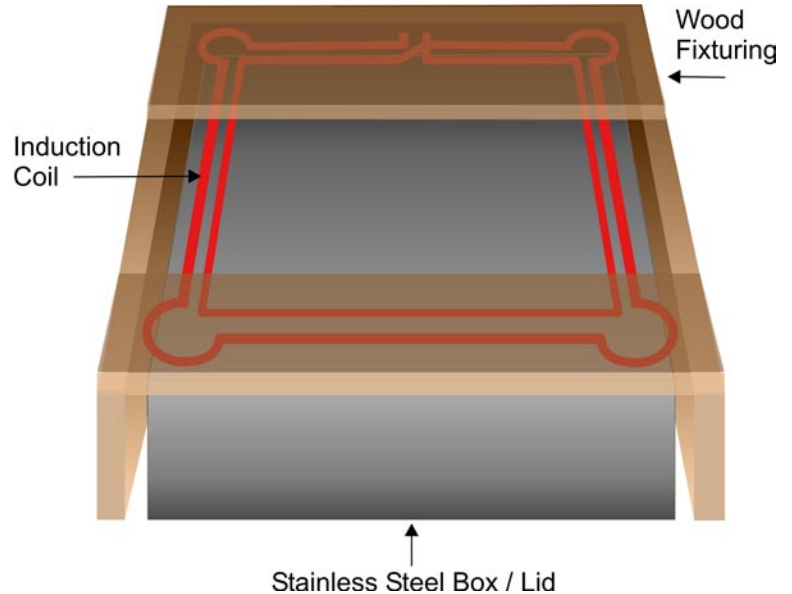


Desoldering A Stainless Steel Lid From a Steel Box



Research Objective

To desolder and remove a steel lid from a steel box

Parts & Materials Description

14" W x 26" D" x 8" H stainless steel box and lid assembly, soldered together.

Temperature Required

400°F

Induction Heating Equipment

5 kW RF power supply, 2-turn, rectangular tube induction coil

Operating Frequency

125 kHz

Heating Procedure

The testing was done in an open air atmosphere. For this application a specially designed two-turn induction coil was attached to a wooden fixture which surrounded the top and sides of the box. The square shape of the coil matched the profile of the box lid and provided even heat around the lid and into the joint area. The box and lid were placed underneath the induction coil and RF power was applied to heat soak the solder in the joint area. As the solder began to flow, a block and tackle rope and pulley mechanism was used to exert a lifting force on the lid. After four minutes, the lid began to release and was easily pulled away from the box. There was no solder splash as the process concluded.

Conclusion

Consistent, repeatable results were achieved by heating the box and lid to 400°F for four minutes. Since there was no solder splash, a teflon shield between the induction coil and lid was not required.