Ambrell
INDUCTION HEATING SOLUTIONS
an inTEST Company

Application Note

Shrink Fitting a Carbide Ring into a Valve Seat

Objective: To shrink fit a carbide ring into a valve seat.

Equipment: Ambrell EASYHEAT™ 10 kW, 150-400 kHz solid state induction power supply with a workhead and coil specifically designed for this application.

Frequency: 185 kHz

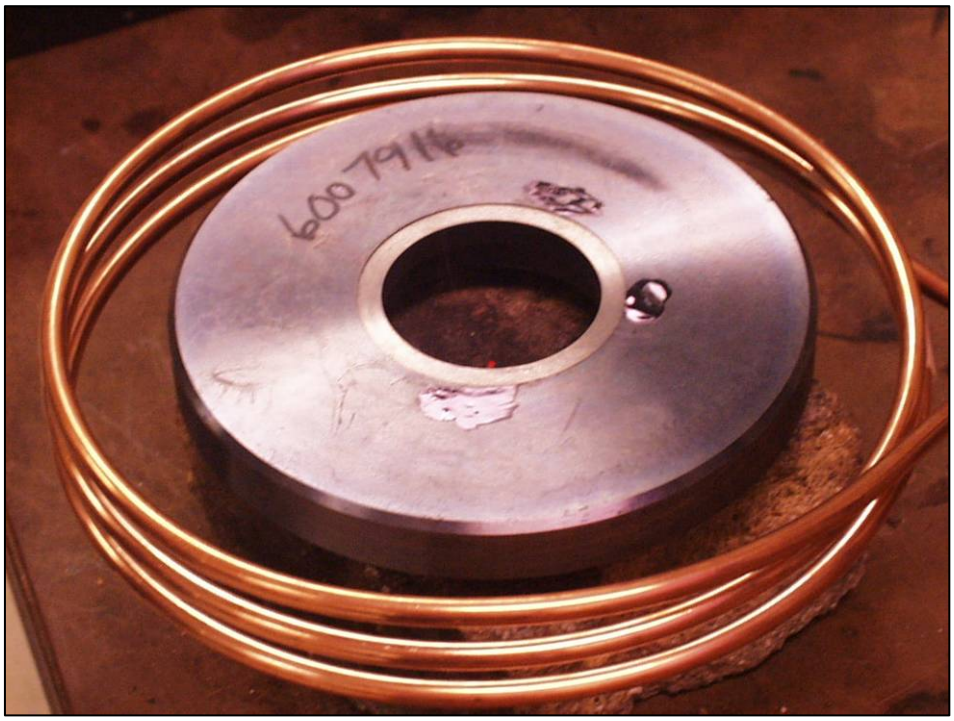
Material: Steel valve seat 6” (152.4mm) OD with 3” (76.2mm) ID hole & .75” (19mm) thick, carbide ring

Temperature: 500 ºF (260 ºC)

Testing: A three-turn helical coil is used to heat the steel valve seat. The steel valve seat is placed in the coil and heated for 50 seconds to enlarge the center hole and drop the carbide ring in for the shrink fitting process.

Benefits:

- Accurate and repeatable results
- Ease of integration into existing production lines
- Energy efficient, only heats the part, not the atmosphere around it
- Hands-free heating that involves no operator skill for manufacturing
- Even distribution of heating



Steel valve seat with carbide ring inserted