

Ticonium and Nobilium

- Objective:** Crucible melting of Ticonium and Nobilium ingots within a period of 45 seconds. Four ingots of Nobilium are to be placed in a crucible (ID#6012) and heated, while a single ingot of Ticonium is placed in a crucible (ID#65045) for heating.
- Material:** 1/2" x 3/8" x 3/8" Ingots of Nobilium
1/2" OD x 3/4" long Ingots of Ticonium
- Temperature:** 2650°F (Nobilium)
2450°F (Ticonium)
- Application:** Due to the small size of the ingots, RF induction heating was required to efficiently couple to the samples in order to provide the necessary power to initiate melting. By using the Ameritherm SP 5, 5 kW output solid state induction power supply and a five (5) turn helical coil, the following results were achieved:
- 35 seconds was required to fully melt the Nobilium Ingots.
 - 30 seconds of heating time was required to melt the Ticonium Ingot.
- Equipment:** Ameritherm SP 5, 5 kW output solid state induction power supply including four (4) capacitors totaling 1.33 μ F, and a five (5) turn helical coil made from 3/16" tubing and measuring 1 5/8" ID and 1 1/2" high.
- Frequency:** 105 kHz (Nobilium)
150 kHz (Ticonium)

*Application Illustration Located on Reverse



Induction Heating Application Notes

