



Graphite Susceptor

Objective To Heat a graphite susceptor to 1100 °C in an inert atmosphere of Nitrogen and Hydrogen. The susceptor is to be used for metal oxide chemical vapor deposition (MOCVD) crystal growth experiments. Verification of temperature reached is critical.

Material Graphite Susceptor measuring 3" in diameter and 1 1/4" thick.

Temperature 1100 °C

Frequency 171 kHz

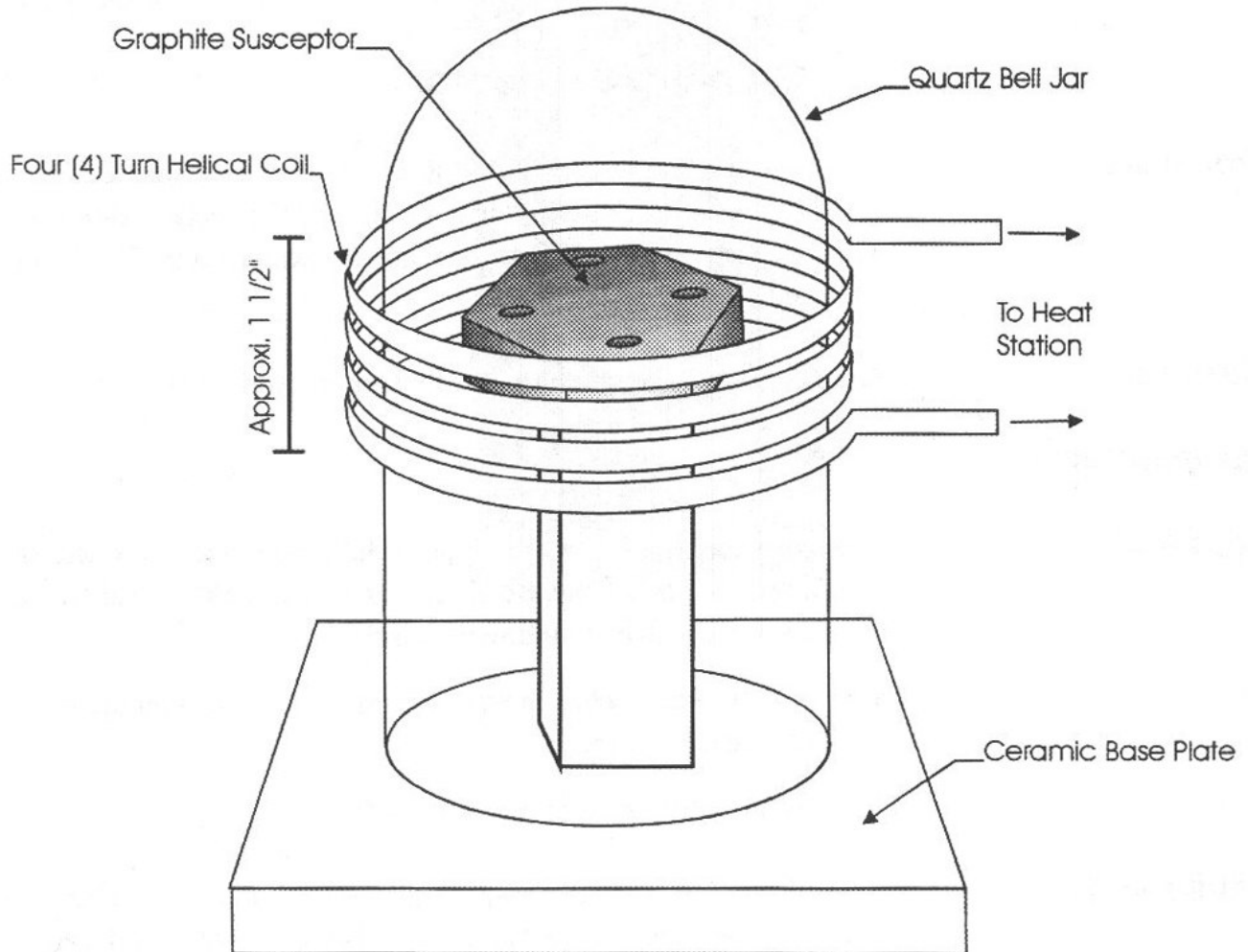
Equipment Ameritherm 5kW solid state induction power supply including one (1) remote heat station containing two (2) 1.0 µF capacitors and a high voltage transformer, and a four (4) turn helical coil with a 5" inside diameter and a length of 1 1/2".

Process The Ameritherm 5kW solid state induction power supply with a four (4) turn helical coil and a two color IR optical pyrometer were used to achieve the following results:

- Results**
- 1100 °C was reached in five (5) minutes as read from the two color IR optical pyrometer.
 - An even heat pattern was observed.

Application illustration on next page

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