Induction Crucible melting

United Induction Heating Machine Limited

We are experienced in Induction Heating, induction heating machine, Induction Heating equipment. They are widely used in:
- Induction heating service
- Induction heat treatment
- Induction brazing
- Induction hardening
- Induction welding
- Induction forging
- Induction quenching
- Induction soldering
- Induction melting
- Induction surface treatment applications

http://www.uihm.com

Crucible melting Objective
Heat to melting point various materials in a nitrogen atmosphere in a graphite or molybdenum crucible.

Material
- Magnesium fluoride
- Tantalum pentoxide
- Aluminum
- Yttrium fluoride
- Germanium
- Hafnium
- Titanium dioxide
- Pyrex bell jar

Temperature
Melting temperatures vary.

Frequency 160 kHz

Equipment
- Power of 45kW induction heating system, equipped with a remote workhead containing two 1.0μF capacitors for a total of 0.5 μF
- An induction heating coil designed and developed specifically for this application.

Process
The crucible is heated using a coil with a four turn pancake at the base that extends upward into a three turn helical coil.

Times and melting temperatures vary due to the properties of the different materials.

Results/Benefits
Induction heating provides:
- Faster process time than electron beam heating.
- Repeatable, consistent results.
- Even distribution of heating.

Various materials in the crucibles