



## ANNEXURE I (A)

### SPECIFICATION OF THE MAGNETIC INDUCTION HEATING SYSTEM

1. Description of the item: Induction heating system
2. Detailed SPECIFICATIONS:

The scope of the work includes: supply, installation and commissioning of a radio frequency induction heating system for field induced heating of magnetic nano particles.

#### i) R.F. Induction Heating Power Supply

**Induction Heating Equipment:** Induction heating power supply with heat station (3 m length of R.F. cable)

**Frequency category:** High frequency

**Rated Output Power:** 12 Kw

**Rated Coil Terminal Power:** 12 Kw

**Input voltage:** 415 Volt  $\pm$  5 %

**Operating Frequency range:** 100 -- 400 KHz

**Type of control:** Local, Remote (4-20 milli Amps), P.L.C, Temperature feedback, RS 432 communications

**Various feature of the power supply:** In-built P.L.C, PID controller, Recipe program segments, Real time monitoring of current, voltage, power and frequency, set-points for voltage and power, In-built fault display, CE marked.

**Various In-built safety features:** Maximum and minimum frequency alarm, Power supply water failure, Power module failure, Capacitor box water safety, Inductor water safety, power supply over temperature, Output over current, Output inductor short circuits, Output over voltage.

#### ii) R.F. Induction Coil (compatible)

**Copper Grade:** Electrolytic copper

**Inductance:** 2.36 micro Henry

**Section:** Rectangle Tube

**Type of Cooling:** Water Forced

**Type of Connection:** Sliding

**Type of Insulation:** Plasma Coating

**Shape:** Circular

**Diameter:** Please specify the available diameter

**Nos. of turn:** 6

iii) Fibre optic temp probe (suitable for open loop measurement).

iv) Installation, commissioned and suitable training must be provided.

v) Instruction manual (English Language) must be provided.



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- vi) Warranty: One year warranty must be provided and must cover defective materials and defective workmanship for one year from the date of commissioning.
- vii) Input Power of all the equipment must be compatible with Indian standard single, two or three phase power supply.