INDIAN INSTITUTE OF TECHNOLOGY KANPUR Department of Physics

Kanpur - 208016, India

e-mail: soumikm@iitk.ac.in

Tel: +91-512-259-6276/6784

Dr. Soumik Mukhopadhyay

Assistant Professor Department of Physics IIT Kanpur Kanpur - 208016, India

Enquiry no.: PHY/SoM/EQP/2013/2 (revised and extended)

Enquiry date: 02/09/2013 Closing date: 12 /09/2013

Request for submission of quotation for "e-beam evaporation set up for thin film deposition"

Dear Sir/Madam,

Sealed quotation(s) are required on or before September 12th latest by 4 PM meeting all technical specifications as mentioned below:

Terms and conditions:

Quotations should have a validity of a minimum of 60 days.

The equipment should be provided with a minimum warranty of 1 year.

Quotations are required in duplicate in a sealed envelope with enquiry number mentioned on the envelope.

The delivery period should be specifically stated.

The rate offered should be F.O.B (specify city).

Institute is exempted from payment of Excise Duty under notification no.10/97.

Institute is entitled to avail concession rate of sales tax as admissible under Sub-sec 5 of Sec 8 C.S.T Act 1956 applicable to Educational/Research institution in inter-state purchase.

Companies would have to demonstrate the deposition of material of our choice (Permalloy, Ni, Co, Al₂O₃ for example) after installation.

The manufacturer should have installed at least three similar systems in the reputed organizations/institutions of the country.

MINIMUM GENERAL SPECIFICATIONS:

1. Electron-beam evaporation system having Vacuum Chamber with Electron Gun and Power supply is needed for the deposition of thin films of magnetic and oxide materials.

- 2. Electron Gun (3KW 180 degree 4 source) should have hearth made of OFHC Copper for better thermal conductivity, better magnetic field distribution, high voltage insulation and mechanical strength. Filaments should be properly positioned for proper evaporation & for easy replacement.
- 3. The electron gun should be able to operate continuously with full power for sufficient amount of time depending upon the material to be evaporated.
- 4. Pumps used in the system should be from reputed manufacturers.
- 5. The system must have additional facility for thermal evaporation.
- 6. The materials for deposition such as Permalloy, Al₂O₃, etc. should be provided by the manufacturer and quoted along with the main system.
- 7. Sufficient spares should be provided.

TECHNICAL SPECIFICATIONS:

Vacuum Chamber

Nominal Internal size ≥ 360 mm x 360 mm Nominal internal height of the Chamber≥ 300 mm

Electron Gun and power supply

Power rating: minimum 3 KW Number of Sources (at a time): 4 (Four)

Power supply with HT and LT options

Soumik Mukhopadhyay Dept. Physics IIT Kanpur