

**INDIAN INSTITUTE OF TECHNOLOGY
HAUZ KHAS, NEW DELHI-110 016**

Date: 26-10-2015

NOTICE INVITING QUOTATIONS

Subject: **Thermal Evaporation coating unit**

Indian Institute of Technology Delhi invites sealed tender offers in two bid format (Technical bid and Commercial bid) from eligible and experienced OEM (Original Equipment Manufacturer) OR OEM Authorized Dealer for **Thermal Evaporation coating unit** with three years on site comprehensive warranty from the date of receipt of the material as per terms & conditions specified in the tender document.

The quotations plus additional details should reach by 5:00 P.M. on 16 November 2015 (Monday).

TECHNICAL SPECIFICATION:

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S. No.	Feature	Specification
1.	General Description	1. The equipment is to be used for vacuum evaporation of metals on to a substrate. 2. The evaporation is to be done in a high vacuum contamination free chamber.
2.	Vacuum Chamber	The cylindrical chamber made out of stainless steel with high vacuum sealing and hydraulic lifting mechanism. The chamber has two numbers of 3 "port at right angles and fixed with toughened glass to view inside. a. Nominal Internal Diameter : 300 mm c. Nominal Height : 450 mm
3.	Base Plate	A base plate of 13" dia is made out of SS 304 material, finely ground and electro chemically polished to achieve a fine surface finish to seal with an L-gasket fixed on the bell jar.
4.	Chamber Gadgetories	
i.	L.T. Evaporation feed through (filament holder)	Three (3) set of LT evaporation feed through shall be provided for thermal evaporation. Each feed through shall have independent DC power supply with common ground. Three separate Variacs should be provided for controlling.
ii.	Evaporation Source Holder	Three set of evaporation source Holder. These can accept Filament/Basket/Boat evaporation sources.
iii.	H.T. Ion clean feed through and Cleaning Gadget	One HT electrical insulated feed through which can carry 5 KV power for Ion bombardment. For Ion cleaning/bombardment of substrate. An annular (bar type) aluminium cathode for ion cleaning/bombardment with the spherical work holder.
iv.	Source Shutter	Special source shutter is designed to cover or uncover simultaneously the two sets of sector filament holders used with rotary work holder. This shutter can be attached to the standard shaft seal.
v.	Substrate Heater	Substrate heater system which can give a maximum of 800°C with Kanthal element and digital PID controller.

vi.	Digital film thickness monitor	4 digit LED display, Range: 0.000 to 999.9 K Å.
5.	Vacuum Pumping System	
i.	Direct drive rotary pump	a. Free air displacement Capacity (Meter cube per hour) :15 (250 lit/min capacity) b. Ultimate vacuum when measured on a McLeod gauge with gas ballast Closed(m. bar) as per pnuerope standard: >1x10-3 c. Motor (HP) (Single phase) : ½
ii.	Oil Diffusion pump	a. Nominal diameter (mm) : 114 b. Ultimate vacuum (m. bar) :> 5x10-6 c. Effective Pumping Speed (lit/sec) : 500 d. Type of jet : Fractionating e. No. of stages : 2 f. Oil charge (cc) : 100 g. Heater rating (watts) : 500 h. Water circulation : 3-4 lit/min
6.	Vacuum Measuring Gauges	a. Digital pirani gauge with two Pirani gauge heads to independently monitor the roughing (chamber) and backing pressure. Vacuum is the chamber or pipe line can be seen on the gauge display using a selector switch. This pirani gauge can measure vacuum level from 0.5 m. bar to 0.0001 m. bar. b. Penning gauge with one gauge head to monitor high vacuum on a separate Penning meter in two ranges, from 1 x 10-3 to 1 x 10-5 m. bar and from 2 x 10-5 to 1 x 10-6 m. bar.
7.	L.T. power Supply	Three L.T. power supply units, which can be controlled separately. Each power supply consists of a transformer capable of delivering 200 amps at 10 volts.
8.	H.T. power Supply	H.T. power supply is provided and it consists of 5000 volts DC open circuit, 3500 volts and 50 mA. High reactance type transformer and solid state bridge rectifier.
9.	L.T/H.T. Controls and Meters	Separate Dimmer stats should be provided in the LT/HT circuit for output power variation. Separate meters are provided for LT/HT current read out.
10.	Power Connections	To connect the power to the system 5 meters long 15 amps 3 wire chord with plug shall be provided.
11.	Installation	Installation should be carried out by trained personnel. Installation includes complete fitting, fixing and testing.
12.	Warranty	Three years warranty against all manufacturing defects.

Additional Details:

1. Please furnish brochure cum data sheets from the original manufacturer for the specifications of the item quoted, or better; without this, quotation will be rejected.
2. Please furnish a list of recent customers (Address, Email & Phone No.) where the specific product has been supplied, if any.

TERMS & CONDITIONS COVERING SUBMISSION OF QUOTATIONS:

1. PRICE: The price should be quoted in net per unit (after breakup) and must include all packing and delivery charges. The offer/bid should be exclusive of taxes and duties, which will be paid by the purchaser as applicable. However the percentage of taxes & duties shall be clearly indicated.

The price should be quoted without custom duty and excise duty, since IIT Delhi is exempted from payment of Excise Duty and is eligible for concessional rate of custom duty. Necessary certificate will be issued on demand.

In case of import supply the price should be quoted on FOB Basis only. Under special circumstances (eg. perishable chemicals), when the item is imported on CIF, please indicate CIF charges separately upto IIT Delhi indicating the mode of shipment. IIT Delhi will make necessary arrangements for the clearance of imported goods at the Airport/Seaport. Hence the price should not include the above charges.

2. DISCOUNT/REBATES: Special discount/rebate wherever admissible, keeping in view that the supply is being provided for educational purpose in respect of public institution of national importance, may please be indicated.

3. TERMS OF PAYMENT: Payment against delivery (Wire Transfer after receipt of item).

4. VALIDITY OF QUOTATIONS: Quotations should be valid at least for a period of **90** days.

5. DEALERSHIP CERTIFICATE: Letter from manufacturer to be attached for authenticity of Dealership/agency. Quotations without authorized dealership certificate will be rejected. Please note that either the manufacturer or the authorized dealer can submit quotation, but both cannot submit quotation for the above item.

6. PROPRIETARY CERTIFICATE: If the items are proprietary in nature, please furnish a copy of the proprietary certificate.

7. COMPLIANCE STATEMENT: Please include a statement of compliance for all the above specifications.

8. CORRESPONDANCE: No correspondence regarding acceptance/rejection of a quotation will be entertained.

9. INSTITUTE'S RIGHTS: IIT Delhi reserves the rights of acceptance or rejection of any or all Quotations.

Quotations may please be sent to:

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