DEPARTMENT OF CHEMICAL ENGINEERING INDIAN INSTITUTE OF TECHNOLOGY DELHI HAUZ KHAS, NEW DELHI – 110016

Ref No: IITD/ChemEng/RP02936 Dated: 9/03/2015

NOTICE INVITING QUOTATION

Sub: Purchase of Turbo Molecular Pumping System attached with Dry Vacuum Pump

Quotations are invited for suitable "Turbo Molecular Pumping System attached with Dry Vacuum Pump" for table-top DC Sputtering System with the following specifications from the vacuum pump manufacturers. Note that this is a special type pump for sputtering system. Bids from specific manufacturer who provide such turbo pump for sputtering system having stringent spec as follows and known worldwide for its quality will be opened.

S.N.	Item description		Quantity
1.	Turbo Molecular Pump (TMP)		
	Turbo pump specifications are as follows:		One
	1. Flange (in)	DN 100 ISO-K	
	2. Flange (out)	DN 25 NW	
	3. Fore-vacuum max. for N ₂	15 Torr	
	4. Gas throughput at full rotational speed for N2:	10-15 Torr 1/s	
	5. Pumping speed for Ar and N ₂	Approx. 275-350 1/s	
	6. Rotation speed	50000-60000 min ⁻¹	
	7. Rotation speed variable	35-100 %	
	8. Cooling method	Air	
	9. Noise level	< 50 dB	
2.	Dry Vacuum Pump (DVP) ry Vacuum pump specifications are as follows:		
	1. Flange (in)	DN 25 NW	
	2. Flange (out)	DN 25 NW	One
	3. Ultimate Pressure	< 10 ⁻⁵ bar	
	4. Displacement	Approx. 12-15 m ³ /hr	
	5. Motor Rating	250-300W, 220-240V, 1 phase, 50-60Hz	
	6. Rotation speed	1700-1900 rpm	
	7. Leak Tightness	<10 ⁻⁹ bar.l/s	
	8. Noise level	< 50 dB	

TERMS and CONDITIONS:

- 1. DVP should be supplied fitted with one Linear Pirani Gauge (NW25, 1 bar to 10⁻⁷ bar), one Panning Gauge (NW25, 10⁻⁵ bar to 10⁻¹³ bar), one Active Ion Gauge (NW25, 10⁻⁵ bar to 10⁻¹² bar), and one Solenoid Valve (220-240V, Al).
- 2. The system should be "Plug and Play" type i.e. the system as supplied, should have TMP connected with DVP and have all gauges and Solenoid valve fitted in place, ready to be attached with chamber.
- 3. System should be supplied with all necessary fittings, valves, o-rings and bellows.
- 4. The quotations, in sealed envelopes superscripted "Ref: IITD/ChemEng/RP02936" should reach Prof. S. Basu, (Head) Department of Chemical Engineering., Indian Institute of Technology Delhi, Hauz Khas, New Delhi 110016, on or before *March* 30st, 2015, 5:00pm.
- 5. Separate quotations should be submitted for **Technical bid** and **Commercial bid** in two separate and clearly marked envelopes. Please provide agency certificate and proprietary certificate wherever applicable. The prices quoted must include **CIF price**, **New Delhi**.
- 6. Institute reserves the right to accept/reject all/any quotation without assigning any reason thereof.
- 7. The delivery period should be clearly indicated in the quotation.
- 8. Submitted quotations should clearly mention the validity period, preferably for a minimum of 3 months.
- 9. Incomplete and conditional submitted tenders would be summarily rejected.
- 10. The mode of payment should be clearly indicated.
- 11. Necessary certificate should be enclosed by the vendor in case of proprietary nature of the quoted items.
- 12. In case the quotation is being submitted by authorized agent of the principal manufacturing company, the **Authorized Sales Agency certificate from the principals** should be furnished along with the quotation. Quotations without this authorization certificate will be rejected.
- 13. The quotation should include comprehensive warranty for **preferably** 3 years.
- 14. The name of the institutes where the above systems have been supplied recently should be provided.

Chairman, PFC