



**INDIAN INSTITUTE OF TECHNOLOGY
KHARAGPUR – 721 302**

INVITATION FOR TENDER FOR SUPPLY OF Gas Permeability Apparatus IN THE MATERIALS SCIENCE CENTRE.

Sealed Tender offers are invited in two separate sealed covers (Technical and Commercial offers) from eligible manufacturers/suppliers or their direct Indian agents for the supply of the **Gas Permeability Apparatus**. Each envelope should be duly superscripted with (i) the Tender Notice No. given in the table below (ii) content of the envelope (i.e. Technical Bid / Commercial Bid).

Please send offers **ALONG WITH DESCRIPTIVE CATALOGUE/BROCHURE**. The validity of the bid should be at least four months from the date of opening of this tender. Please ensure that your quotation reaches this office not later than 14th December 2018 at 16:00 hours at the following address:

Chairman, Purchase Committee,
Materials Science Centre,
Indian Institute of Technology,
Kharagpur-721 302 (India).

Earnest Money of **Rs. 90000/-** is to be deposited in the form of Account Payee Demand Draft in favour of IIT Kharagpur, payable at Kharagpur, India. Any Bid which is not accompanied with an EMD shall be summarily rejected. Earnest money deposited will be forfeited if the tenderer withdraws or amends its tender or impairs, or derogates from the tender in any respect within the period of validity of its tender. No interest will be paid on the earnest money of the unsuccessful bidders.

Tender Reference: IIT/MSC/DP/2018-19/81/28

Dated: 08.11.2018

Tender Reference	IIT/MSC/DP/2018-19/81/28 Dated: 08.11.2018
Price of the Tender Papers	Nil
Last Date and Time for receipt of technical/commercial bids in separate sealed envelopes	14.12.2018 at 4-00 P.M.
Date and Time of opening of bids	17. 12. 2018 at 3.30. P.M.
Place of opening Tender offers	Materials Science Centre, Indian Institute of Technology, Kharagpur-721 302, West Bengal, India.
Address of communications	As stated above
Contact telephone numbers	+91 3222 283972/282273

Detailed Technical specifications Gas Permeability Apparatus:

System	Gas Permeability Apparatus
Pressure	Up to 10 bar
Temperature	20 to 90 °C
Test gases	H ₂ , N ₂ , O ₂ , CO ₂ , CH ₄ , C ₂ H ₆ , He
Flow control	Mass Flow Controller: 1.0 to 10 mL/min, 1 to 10 bar Feed flow range: 1 – 200 L/h (1 cm ³ /min, cc/min = 0.060 L/h)
Permeate flow range	0.005 – 1.3 mL/min
Pump	Diaphragm Pump and (or) Turbomolecular Pump
Pressure Control	Pressure sensor: Pressure range: 0 – 30 bar, Upstream pressure sensor: 0 to 10 bar, Downstream pressure sensor: 0.5 to 1000 mbar absolute, Pressure accuracy: ± 0.1%
Valves	Solenoid valves (Pressure range: 0 – 100 barg), Vacuum Solenoid valve (Pressure range: -1 – 5 barg), Pressure control valve (Pressure range: 0 – 10 barg)
Membrane details	Dense membranes with very low gas permeability (like, Polyimide, Polyamide, Polytrizole and composite membranes) Membrane size: Diameter: 6 cm (app). Thickness: 40-200 micrometer
Permeation cell	Material: Stainless steel, Maximum pressure: 70 barg, Membrane size (mm) ~ 50 mm (Ø)
Communication	Data Acquisition Controller system/computer and fully automatic programming interface
Tubing	High pressure tubing and fittings made of stainless steel
Software Support	For the design of test programs and Helpdesk related questions and problems
Accessories	Membrane Oven, Temperature sensors, Temperature control, Additional feed line + Sweep gas feed line, Permeate flow meter, Transport box
Installation	On-site installation and training
Warranty	Three years after the date of installation of the instrument
Spare part management	3 year spare part management
Electrical connection	220 volts, alternating at 50 cycles (Hertz) per second

GENERAL TERMS & CONDITIONS

PLEASE SPECIFICALLY INDICATE THE FOLLOWING POINTS IN YOUR QUOTATIONS AND COMPLY THE TERMS AS MENTIONED HEREUNDER:

1. TENDER ARE INVITED IN DUPLICATE SETS COMPLYING THE REQUIREMENT FOR TENDER AS DETAILED IN THE TENDER SPECIFICATION TO BE SUBMITTED IN THE COMPANY'S/FIRM'S LETTER HEAD NEATLY PRINTED/TYPED DULY SIGNED BY AUTHORIZED PERSON WITH THE SEAL OF THE BIDDERS. ALL ENVELOPS CONTAINING THE TENDER SHOULD BE PROPERLY SEALED. SEPARATE ENVELOPS SHOULD BE USED FOR TECHNICAL AND PRICE BID AND INDICATION TO THEIR EFFECT MAY PLEASE BE SUPERSCRIBED ON THE ENVELOP.

2. TECHNICAL CATALOGUE/LEAFLET SHOULD BE ENCLOSED WITHOUT FAIL.

3. PLEASE CONFIRM WHETHER YOU ARE AUTHORISED TO QUOTE ON BEHALF OF YOUR PRINCIPALS AND IF SO, PLEASE ENCLOSE A COPY OF SUCH AUTHORISATION WITH YOUR QUOTATION.

4. **PRICE BID FOR FOREIGN FIRMS:** PRICES ARE TO BE QUOTED ON EX-WORKS DULY PACKED OR ON FCA/FOR INTERNATIONAL PORT BASIS AND ALSO INCLUDING AGENCY COMMISSION PAYABLE TO YOUR INDIAN AGENTS, IF ANY SHOWING CLEARLY THE FOLLOWING BREAK UP:

- I) EX-WORKS PRICE
- II) PACKING AND FORWARDING
- III) FREIGHT
- IV) ANY OTHER RELEVANT EXPENSES
- V) TAXES PAYABLE BY THE INSTITUTE

INSURANCE WILL BE PAID BY OUR INSTITUTE SEPARATELY AND SHOULD NOT FORM PART OF THE QUOTED PRICE.

PRICE BIDS FOR INDIAN FIRMS: PRICES ARE TO BE QUOTED ON F.O.R., IIT KHARAGPUR, ON DOOR DELIVERY BASIS CLEARLY SHOWING THE BREAK UP.

5. PERIOD OF VALIDITY: BIDS SHALL REMAIN VALID FOR ACCEPTANCE FOR A PERIOD OF 120 DAYS FROM THE DATE OF OPENING.

6. INDIAN AGENTS ADDRESS AND PERCENTAGE OF AGENCY COMMISSION INCLUDED IN ABOVE F.O.B./EX-WORKS PRICE. (THIS WILL BE PAID TO THE INDIAN AGENTS IN INDIAN RUPEES ONLY AND NOT IN FE). PLEASE ENCLOSE COPY OF AGENCY AGREEMENT ENTERED INTO WITH YOUR PRINCIPALS INDICATING THE NATURE OF AFTER SALES SERVICES OF INDIAN AGENTS, PRECISE RELATIONSHIP AND MUTUAL INTEREST IN THE BUSINESS.

7. MEASUREMENTS/WEIGHT: NETT/GROSS OF THE CONSIGNMENT. IN CASE OF AN ORDER, YOU SHALL USE AIR WORTHY PACKAGE (AS APPLICABLE) DULY CERTIFIED WITH DOCUMENTS-PLYTO-SANITARY CERTIFICATE (AS PER QUARANTINE ORDER 2003).

8. SCOPE OF SUPPLY: SHOULD BE INCLUDED FREE INSTALLATION AND COMMISSIONING.

9. PAYMENT TERMS FOR FOREIGN FIRMS:

(A) 100% PAYMENT THROUGH SIGHT DRAFT/FOREIGN DEMAND DRAFT/LC (EXCEPTIONAL CASES)/ SWIFT TELE TRANSFER AFTER RECEIPT OF STORE IN GOOD ORDER AND CONDITION.

(B) BANK CHARGES ON LC/SD (WITHIN INDIA APPLICANT ACCOOUNT AND OUTSIDE INDIA TO BENEFICIARY ACCOUNT).

PAYMENT TERMS FOR INDIAN FIRMS:

(A) 100% PAYMENT THROUGH CROSSED ACCOUNT PAYEE CHEQUE/ELECTRONIC TRANSFER AFTER RECEIPT OF STORE IN GOOD ORDER AND CONDITION.

(B) ENSURE MENTIONING:

I) BANK DETAILS OF THE BENEFICIARY AND PAN NUMBER

II) FULL NAME ANDE ADDRESS OF THE BENEFICIARY ON WHOM ORDER HAS TO BE PLACED.

(IN BOTH THE CASES ABOVE, INSTITUTE MAY PAY 90% ON DELIVERY OF THE ITEMS/STORES AND THE REMAINING, 10% AFTGER SATISFACTORY INSTALLATION AND PERFORMANCE).

10. WHETHER ANY EXPORT LICENCE IS REQUIRED FROM YOUR GOVERNMENT, IF SO, PLEASE CONFIRM WITH DETAILS.

11. COUNTRY OF ORIGIN OF THE GOODS IS TO BE MENTIONED.

12. THE INSTITUTE SHALL PROVIDE THE CUSTOMS DUTY EXEMPTION CERTIFICATE AGAINST GENERAL EXEMPTION NO. 37(NOTIFICATION NO. TU/V/RG-CDE(344)/2011, DATED: 10.10.2011).

13. LIQUIDATED DAMAGES: THE STORES SHOULD BE DELIVERED DISPATCHED TO DESTINATION AND READY FOR OPERATION NOT LATER THAN THE DELIVERY DATE

SPECIFIED. IN THE SUPPLIER FAILS TO DELIVER ANY OR ALL THE STORES OR PERFORM THE SERVICE BY THE SPECIFIED DATE, LIQUIDATED DAMAGES AT 1% PER MONTH OR PART THEREOF IN RESPECT OF THE VALUE OR STORES WILL BE DEDUCTED FROM THE CONTRACT PRICE SUBJECT TO A MAXIMUM OF 5%. ALTERNATIVELY, THE ORDER WILL BE CANCELLED AND THE UNDELIVERED STORES PURCHASED FROM ELSEWHERE AT THE RISK AND EXPENSE OF SUPPLIER.

14. PATENT RIGHTS: THE SUPPLIER SHALL INDEMNIFY THE PURCHASE AGAINST ALL THIRD PARTY CLAIMS OF INFRINGEMENT OF PATENT, TRADEMARK, OR INDUSTRIAL DESIGN RIGHTS ARISING FROM USE OF THE GOODS OR ANY PART THEREOF IN INDIA.

15. ONLY THOSE BIDDERS WHO'S BIDS HAVE BEEN TECHNICALLY FOUND ACCEPTABLE WILL ONLY BE INVITED FOR PARTICIPATION IN THE PRICE BID.

16. THOSE BIDDERS WHO DO NOT RECEIVE ANY COMMUNICATION FOR PARTICIPATION IN PRICE BID OPENING MEETING MAY PRESUE THAT THEIR BID HAS NOT BEEN ACCEPTED BY THE INSTITUTE.

17. CONDITIONAL OFFER WILL NOT BE ACCEPTED.

18. LATE TENDER, i.e. TENDEDR RECEIVED AFTER THE DUE DATE AND TIME OF SUBMISSION AS MENTIONED ABOVE SHALL NOT BE ACCEPTED.

19. BIDDERS TO ENCLOSE THE FOLLOWING DOCUMENTS:

A) CURRENT INCOME TAX AND SALES TAX CLEARANCE CERTIFICATES AND PAN NO.

B) BANKER'S SOLVENCY CERTIFICATE

C) SUMMARY OF AUDITED STATEMENT OF ACCOUNTS FOR THE LAST THREE YEARS TO BE ENCLOSED AND FINANCIAL HIGHLIGHTS AND THE KEY PERFORMANCE DURING THE LAST THREE QUARTERS TO BE ENCLOSED AS PER FORMAT:

COMPANY'S KEY PERFORMANCE

DESCRIPTION	JAN. TO MARCH	APRIL TO JUNE	JULY TO SEPT
GROSS REVENUE			
PROFIT BEFORE TAX			
PROFIT AFTER TAX			
RETURN ON INVESTED CAPITAL (ROIC)			

D) NAME AND ADDRESS OF MINIMUM THREE CLIENTS TO WHOM SUCH EQUIPMENT HAVE BEEN SUPPLIED SHOULD BE MENTIONED.

20. WARRANTY/GUARANTEE: THIS COMPREHENSIVE WARRANTY/GUARANTEE SHALL REMAIN VALID FOR 36 MONTHS AFTER THE GOODS (OR ANY PORTION THEREOF AS THE CASE MAY BE) HAVE BEEN DELIVERED AND COMMISSIONED TO THE FINAL DESTINATION INDICATED IN THE COONTRACT.

21. THE INSTITUTE DOES NOT BIND ITSELF TO OFFER ANY EXPLANATION TO THOSE BIDDERS WHO'S TECHNICAL BID HAS NOT BEEN FOUND ACCEPTABLE BY THE EVALUATION COMMITTEE OF THE INSTITUTE.

22. ALL TENDERS (UNLESS OTHERWISE SPECIFIED) ARE TO BE SUBMITTED TO CHAIRMAN (PURCHASE COMMITTEE), MATERIALS SCIENCE CENTRE, INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR-721 302 AND ACKNOWLEDGEMENT TO BE OBTAINED.

IMPORTANT:

1. IIT Kharagpur authority may accept or reject any or all the bids in part or in full without assigning any reason and does not bind itself to accept the lowest bid. The Institute at its discretion may change the quantity / upgrade the criteria / drop any item or part thereof at any time before placing the Purchase Order.

2. Promptly make arrangements for repair and / or replacement of any damaged item (s) irrespective of settlement of claim.

3. In case of any dispute, the decision of the Institute authority shall be final and binding on the bidders.

4. For any query pertaining to this bid document correspondence may be addressed to **Prof. P. Banerji, HOC / Prof. S. Banerjee, Chairman Purchase Committee** at the address mentioned above.

LAST DATE FOR SUBMISSION OF SEALED BIDS: 14. 12. 2018 at 4.00 P.M.

- 1) Please note that the Institute remains closed during Saturday and Sunday and all specified Government Holidays.
- 2) Fax, e-mail Tender will not be accepted. Duplicate Bid document must be submitted in a separate closed cover.
- 3) The General Terms and Conditions as stated above related to supply of stores / equipments / assets etc. and for specific service other terms and conditions of the Institute will apply.