

भारतीय प्रौद्योगिकी संस्थान तिरुपति

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Tender No. IITT/CHEM/2022-23/28

01 June 2022.

NOTICE INVITING TENDER FOR SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF MICRO FILTRATION AND ULTRA FILTRATION MEMBRANE SYSTEM

(E-PROCUREMENT MODE ONLY)

Indian Institute of Technology Tirupati (IIT Tirupati) invites online bids (e-tender) in Two bid system from eligible Class-I & Class-II in line with Government Public Procurement order No.P-45021/2/2017-BE-II dated: 04.06.2020 for the following:

Item Description	Quantity (approx.)	Tender Fee (Inclusive of all taxes in Rs.)
Supply, installation, testing and commissioning of Micro Filtration and Ultra Filtration Membrane System as per the specifications of the tender documents	01 Unit	1500/-
Total	•	1500/-

The Tender Document can be downloaded from Central Public Procurement (CPP) Portal http://eprocure.gov.in/eprocure/app and bid is to be submitted online only through the same portal up to the last date and time of submission of tender.

Critical Dates of Tender:

1	Date and time of Online Publication/Download of Tenders	01.06.2022	18.00 hrs
2	Bid submission start date & time	01.06.2022	18.00 hrs
3	Bid submission close date & time	21.06.2022	15.00 hrs
4	Closing date & time for submission of EMD/Tender fee	21.06.2022	15.00 hrs
5	Opening of Technical bids	22.06.2022	15.00 hrs

1. About IIT TIRUPATI:

Indian Institute of Technology Tirupati (IIT Tirupati) is an Autonomous Institute under Ministry of Education, Govt. of India.

2. Technical Specifications: Schedule of requirement

S.N Item Description with Specifications

0	
1	MICRO FILTRATION AND ULTRA FILTRATION MEMBRANE SYSTEM
	- 01 Unit

Detailed Specifications of MF/UF Membrane Systems

The configurations of modules, spares, accessories and membranes should include the following

- 1. Stirred cell with membranes (MF, UF, FO)
- 2. Spiral wound module with membranes (MF, UF, FO)
- 3. Flat module with membranes (MF/UF/FO)
- 4. Hollow fiber module with membranes (MF/UF/FO)
- 5. Spare pumps (2 peristaltic and 2 small gear pumps), gaskets, pressure regulators, membranes

Technical Specifications

1: Stirred Cell

Design Specifications

Parameter Conditions	
Max pressure	80 – 90 bar
Membrane dia	40-50 mm
Processing volume	200 ml – 300 ml
Hold up volume	1.0-1.5 ml

Scope of supply:

This specification is intended to cover the minimum requirements to be met in the design, manufacture and supply of DEAD END (STIRRED CELL) SET-UP.

A typical stirred cell set up (1 set):

Sr. No.	Description	Qty	Unit
1	Stirred Cell Set-up (Non Jacketed) SS316L	1	Set

2	Flexible hose pipe (SS316)	1	No.
3	Magnetic stirrer	1	No.
4	Collection tank (1 – 1.5L)	1	No.
5	Weighing balance (Specification given separately)	1	No.
6	High pressure gas regulator with inbuilt safety relief valve	1	No.

FLAT SHEET MEMBRANE RANGES:

Membr ane	MOC	Cut off	Quantity
MF	PES	> 100 kDa	1 each of flat sheet membrane sizes (table below of Sr. No. 1 &2)
UF	PES	1-500 kDa	1 each of flat sheet membrane sizes (table below of Sr. No. 1 &2)
	PA/PES/any other suitable	< 500 Da	1 each of flat sheet membrane sizes (table below of Sr. No. 1 &2)

FLAT SHEET MEMBRANE SIZES

Sr. No.	Sizes	Wet/Dry
1	10-15" x 10-15"	Both
2	1 -1.5 m x 1-1.5 m	Both
3	Min. 800 linear foot roll	Dry

2 Lab Scale System (Spiral wound module)

DESIGN SPECIFICATIONS:

Parameter	Conditions
Membrane Size	(1.5-2.0") Dia x (10-15") length
Membrane area	0.30-0.40 m ²

Operating pressure (Please specify based on membrane)	5 – 35 bar or better
Operating pH	2 – 13
Operating temp	20 – 36 deg C or better

SYSTEM SPECIFICATIONS:

Sr. No.	Description
1	Single compact design system to fit any spiral organic membrane (MF, UF, FO)
2	Inbuilt CIP capability
3	Low process hold up volume of 1L (can be lowered)
4	Max. recovery of the material with min. dead hold up
5	All wetted part SS316L electro-polished

SCOPE OF SUPPLY:

Sr. No.	Description	Qty	Unit
1.	Feed Cum CIP Tank, Plain Jacketed, Insulated, Top Flat and Bottom Cone SS316L - 5L	1	Set
2.	Triplex EPDM Diaphragm pump with VFD(VFD Make ABB/Equi)	1	No.
3.	Membrane housing	1	No.
4.	Pressure Transmitter	2	No.
5.	Temperature Transmitter	1	No.
6.	Flow Transmitter at Permeate	1	No.
7.	PLC panel (MOC: SS304) With 7" HMI	1	Set
8.	Interconnecting clamps, pipes and valves (high pressure)	1	Set
9.	Temp. Controlled circulating water bath (optional)	1	No.

SPIRAL MEMBRANE RANGES

Membrane	MOC	Cut off	
MF	PES	➤ 100 kDa	
UF	PES	1 – 500 kDa	
FO	PA/PES	< 500 Da	

3: Lab Scale System (1 each of Hollow fiber (HF)/Forward Osmosis (FO)/ Plate & Frame (P&F)

DESIGN SPECIFICATIONS

Parameter	Conditions			
	HF	P&F	FO	
Available area	0.05-0.15 m ²	0.010-0.030 m ²	2.0-3.0 m ²	
Operating pressure	2 bar	4 bar	atm	
Operating pH	2-13	2-13	2-13	
Operating temp	20-50 deg C or better	20-36 deg C or better	20-36 deg C or better	

SYSTEM SPECIFICATIONS

Sr. No.	Description
1	Single compact design system to fit any HF (MF, UF,
I	FO), plate & frame housings/elements
2	Inbuilt CIP capability
3	Low process hold up volume of 1L (can be lowered)
4	Max. recovery of the material with min. dead hold up
5	All wetted part SS316L electro-polished

SCOPE OF SUPPLY:

This specification is intended to cover the minimum requirements to be met in the design, manufacture and supply of non-flame proof fixed skid mount lab scale system – MF/UF/FO (ceramic/hollow fibre)

Sr. No.	Description	Qty	Unit
1.	Feed Cum CIP Tank, Plain Jacketed, Insulated, Top Flat and Bottom Cone SS316L - 5L	1	Set
2.	5L collection tank- Plain SS316L	1	No.
3.	Centrifugal feed pump with VFD	1	No.
4.	Ceramic membrane housing	1	No.
5.	Plate & Frame holder with support disk and adjustable knobs	1	No.
6.	Pressure Transmitter Range :0-6 Bar(g)	3	Nos.
7.	Temperature Transmitter	1	No.
8.	Flow Transmitter at Feed & Retentate	2	Nos.
9.	PLC panel (MOC: SS304) With 7" HMI	1	Set
10.	Interconnecting clamps, pipes and valves	1	Set

Note: FO and HF WITHOUT REQUIREMENT OF any housing. They MAY come as an element to be used directly.

AUXILLARY ITEMS REQUIRED TO OPERATE IT AS P&F/FO:

Sr. No.	Description	Qty	Unit
1	Draw Feed Tank, Plain Jacketed, Insulated, Top Flat and Bottom Cone SS316 - 5L	1	No.
2	For Feed Pump & Draw feed - Peristaltic pump	2	No.
3	Flow Transmitter at Permeate Line	2	No.
4	Pressure Transmitter Range :0-6 Bar(g)	1	No.
5	Interconnecting clamps, pipes and valves	1	Set

MEMBRANE RANGES AVAILABLE:

Membrane	MOC	Cut off	Dimension	Quantity
HF	PES/PAN	30, 150 kDa	400 mm length x 35 mm ext. dia	1 each
P&F	PES (MF)	➤ 100 kDa	20.5 cm length x 5.7 cm width	1 each of flat sheet membrane sizes (table below of Sr. No. 1 &2)
	PES (FO)	< 100 Da		1
FO	Proprietary	< 100 Da	300 mm length x 50 mm ext. dia	1

FLAT SHEET MEMBRANE SIZES AVAILABLE:

Sr. No.	Sizes	Wet/Dry
1	10-15" x 10-15"	Both
2	1-1.5 m x 1-1.5 m	Both
3	Min. 800 linear foot roll	Dry

General Specifications:

Specification	Requirement
Certifications	Standard certification such as CE, ISO
	9001 etc. for quality test requirements;

	for energy efficiency and Environmental			
	Impact.			
Power Supply	230v/50hz, 10 amps. Single phase.			
Warranty	3 Years from the date of Installation			
	at IIT TIRUPATI			
Installation, commissioning and	At IIT TIRUPATI			
demonstration				
Training	The supplier of the equipment should			
	provide hands on as well as operational			
	training at the time of installation			
Supplier/Vendor should provide Catalogue in Original and indicating all				
Technical specifications, model and picture of the equipment				
The quoted model should be of latest technique and should not be more than				
5 years old				
All Quoted Component/items/spare parts/accessories should be the same				
manufacture				
Equipment shall be installed & demonstrated at IIT TIRUPATI before				
acceptance				
ares and service availability: Minimum 5 Ye	ears should be provided			

- All offered products technical Specifications and Brochures are to be submitted along with the Technical Bid.
- The detailed scope of coverage of Warranty shall be provided in the compliance statement -Annexure-VII.
- The Bidder shall furnish, as part of its bid, documents establishing the conformity of the Equipment that the Bidder proposes to supply under the Contract to the requirements of the Purchaser, as given in the Tender Document.
- The documentary evidence of conformity of the Equipment to the Tender Document may be in the form of written descriptions supported by Brochure / literature / diagrams / certifications, including: (a) A detailed description of the essential technical, functional and performance characteristics of the Equipment that the Bidder is proposing to supply; (b) Technical details of the major subsystems/components of the Equipment.

3. TENDER FEE & BID SECURITY DECLARATION DETAILS:

- **3.1 Tender Fee of Rs.1500/- (Rupees fifteen hundred only)** should be submitted through ECS (Bank transfer / NEFT / RTGS) in favour of Indian Institute of Technology Tirupati.
- 3.2 Bank A/c Details for crediting Tender Fee:

Name : Indian institute of Technology Tirupati Main Account

Bank : State Bank of India

Account No : 35523338208 IFSC Code : SBIN0006677

3.3 Tender Fee and Bid Security Exemption:

I) Micro and Small Enterprises (MSEs):

Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) for goods produced and services rendered, are exempted from Tender fee and Bid Security. However, they have to enclose valid self-attested registration certificate(s) along with the tender to this effect.

Accordingly, MSEs shall be required to submit valid **Udyam Registration Certificate** for availing benefit under MSE Procurement Policy.

The benefit as above to MSEs shall be available only for Goods produced and services rendered by MSEs. However, traders are excluded from the purview of MSE Procurement Policy.

II) Startup(s):

Startup(s) as recognized by **Department for Promotion of Industry and Internal Trade (DPIIT)**, Govt. of India, are exempted from Tender fee and Bid Security. However, they have to enclose *valid self-attested registration certificate(s)* along with the tender to this effect.

Eligible MSE and startup bidders who seeks exemption from Tender fee/Bid Security as per clause no. (c) above, if they withdraw or modify their bids during the period of validity, or if they are awarded the contract and they fail to sign the contract, or to submit a performance security before the deadline defined in the request for bids document, they will be suspended for the period of three years or as decided by the competent authority from being eligible to submit bids for contracts with the entity that invited the bids.

- **3.4** The Bidders will have to upload scanned copy of Payment details towards tender fee and the same will be accepted only on verification and confirmation by the Institute. Any delay in credit will not be entertained by the Institute. (**As per the format attached in Annexure I**)
- 3.5 Other than eligible MSE and Startup bidders, Bid Security Declaration:

Bidders should have to submit the Bid Security Declaration (As per the format attached in annexure-II) in duly filled and signed condition.

4. ELIGIBILITY CRITERIA

4.1 Other Important Documents (OIDs)

Firm Incorporation Certificate, PAN details, GST details are to be provided.

4.2. Statutory Documents:

- I) The Bidder should give self-declaration certificate for acceptance of all terms & conditions of tender documents. A duly completed certificate to this effect is to be submitted as per the Annexure-I.
- II) The firm should not be in the active debarred list by any Central / State Government / Public Undertaking / Institute and no criminal case registered / pending against the firm or its owner / partners anywhere in India. A duly completed certificate to this effect is to be submitted as per Annexure-III.

III) Experience and Past Performance:

The Supplier should have supplied a minimum of 3 similar system to other CFTI institutes like IIT or IISER in last 3 years i.e. during **2017-18 to 2019-20 or 2018-19 to 2020-21** in India and Vendor should provide satisfactory installation certificates with product details as proof with customer contacts email and phone number as per the **Annexure-IV**.

- IV) The Annual Turnover should be at least **Rs. 10 Lakhs** and be profitable during each of the previous three financial years **i.e. during 2017-18 to 2019-20 or 2018-19 to 2020-21**. Audited financial Statements or Financial Statements showing turnover duly signed by a Chartered Accountant are to be submitted as per the **Annexure-V.**
- V) In case the bidder is a <u>Class-I / Class-II</u> in line with the Public Procurement (Preference to Make in India) Order 2017 No. P-45021/2/2017-PP (BE-II) dated 04 Jun 2020 as amended from time to time. A Self-Declaration Certificate regarding "Class-I/Class-II Supplier" for the tendered items as per the Annexure-VI is to be submitted.

As per the OM of Department of Promotion for Industry and Internal Trade No. P-45021/102/2019-BE-II-Part(1) dated: 04.03.2021. The bidders can't claim themselves as Class-I local suppliers/Class-II local suppliers by claiming the services such as transportation, insurance, installation, commissioning, training and after sales service support like AMC/CMC etc. as local value addition.

- a. 'Local Content' means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all custom duties) as a proportion of the total value, in percent.
- b. 'Class-I local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, has local content equal to or more than 50% as defined under this order.

- c. 'Class-II local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, has minimum local content of 20% but less than 50%, as defined under this order.
- d. 'Non-local supplier'means a supplier or service provider, whose goods, services or works offered for procurement, has local content less than 20%, as defined under this order.
- e. Complaint redressal mechanism: In case any complaint received by the procuring agency or the concerned Ministry/Department against the claim of a bidder regarding local content/domestic value addition in an electronic product, the same shall be referred to STQC.
- f. The bidder shall be required to furnish the necessary documentation in support of the domestic value addition claimed in an electronic product to STQC. If no information is furnished by the bidder, such laboratories may take further necessary action, to establish the bonafides of the claim.
- g. A complaint fee of Rs. 2 lakh or 1% of the value of the domestically manufactured products being procured (subject to a maximum of Rs.5 lakh), whichever is higher, to be paid by Demand Draft to be deposited with STQC. In case, the complaint is found to be incorrect, the complaint fee shall be forfeited. In case, the complaint is upheld and found to be substantially correct, deposited fee of the complainant would be refunded without any interest.
- h. False declarations will be in breach of the Code of Integrity under Rule 175 (1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.
- VI) The bidder should be OEM or OEM authorized Dealers / Channel partners / Distributors of reputed brand having authorization for sales and after sales support. Valid OEM authorization letter is required to participate in this tender.

VII) Prior Registration and / or Screening of bidders:

Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder registered with the competent authority. The concerned bidder(s) are required to attach the relevant valid Registration Certificate along with the bid for consideration.

"Bidder" (including the term 'tenderer', consultant or service provider in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.

"Bidder from a country which shares a land border with India" for the purpose of this Order means:-

- An entity incorporated, established or registered in such a country; or
- A subsidiary of an entity incorporated, established or registered in such a country or
- An entity substantially controlled through entities incorporated, established or registered in such a country; or
- An entity whose beneficial owner is situated in such a country; or
- An Indian (or other) agent of such an entity; or
- A natural person who is a citizen of such a country; or
- A consortium of joint venture where any member of the consortium or joint venture falls under any of the above.

The detailed terms & conditions issued from time to time in this regard by Government of India will be applicable.

VIII) Authorized Representatives:

Bids of bidders quoting as authorised representative of a principal manufacturer would also be considered to be qualified, provided:

- (i) Their principal manufacturer meets all the criteria above without exemption, and
- ii) The principal manufacturer furnishes a legally enforceable tender-specific authorisation assuring full guarantee and s obligations as per the general and special conditions of contract;

and

iii) The bidder himself should have been associated, as authorised representative of the Principal Manufacturer for same set of services as in present bid (supply, installation, satisfactorily commissioning, after sales service as the case may be) for same or similar item for past three years ending on bid opening date.

4.3 TECHNICAL CRITERIA

Bidders should comply the specification of the tendered item in all respect. The detailed format is attached at Annexure-VII. The bidder is to complete the same in all respect and submit accordingly

5. FINANCIAL BID DETAILS

5.1 Financial bid i.e. BOQ given with tender (in **Excel format**) to be downloaded first and uploaded after filling all relevant information strictly as per the format failing which the offer is liable for rejection. Kindly quote your offer on FOR IIT Tirupati (inclusive of all taxes and charges). **Vendor should quote prices in BOQ only, offers indicating rates anywhere else shall be liable for rejection.**

5.2 Concessional Custom Duty / Concessional GST is applicable to IIT Tirupati as a Research Institution. Necessary Certificate to this effect shall be provided by IIT Tirupati to the supplier.

6. TIME SCHEDULE:

S. No.	Particulars	Date	Time
a.	Date of Online Publication of Tender	01.06.2022	18.00 hrs
b.	Bid Submission Start Date	01.06.2022	18.00 hrs
c.	Bid Submission Close Date	21.06.2022	15.00 hrs
d.	Closing Date & Time for Submission of EMD & Tender Fee	21.06.2022	15.00 hrs
e.	Opening of Technical Bids	22.06.2022	15.00 hrs

7. AVAILABILITY OF TENDER

The tender document can be downloaded from http://eprocure.gov.in/eprocure/app and be submitted only through the same website.

8. BID VALIDITY PERIOD

The bid will remain valid for 90 days from the date of opening as prescribed by IIT Tirupati. A bid valid for a shorter period shall be rejected, being non-responsive.

9. BID SUBMISSION

9.1 Instruction to Bidder

- I) Bidders are required to enrol on the e-Procurement module of the **Central Public Procurement Portal (URL: https://eprocure.gov.in/eprocure/app)** by clicking on the link "**Online Bidder Enrolment**" on the CPP Portal. **The registration is completely free of charge**.
- II) Possession of a valid Class II/III DSC in the form of smart card / e-token is a prerequisite for registration and participating in the bid submission activities. DSCs can be obtained from the authorised certifying agencies recognized by CCA India (e.g. Sify/TCS/nCode/eMudhra etc).
- III) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.

- IV) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse.
- V) The Bidders are required to log in to the site through the secured log-in by entering their respective user ID / password and the password of the DSC.
- VI) The CPP portal also has user manuals with detailed guidelines on enrolment and participation in the online bidding process. The user manuals can be downloaded for reference.

9.2 TENDER CLARIFICATION

- I) In case the bidders require any clarification regarding the tender documents, they are requested to contact our office Ph. no: 0877-2503572, Email ID: purchase@iittp.ac.in on or before due date.
- II) Technical and Specifications related Clarifications contact our office No: 08486672740 Email ID: anki.reddy@iittp.ac.in on or before due date.
- III) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk.

9.3 ONLINE BID SUBMISSION PROCEDURE

Cover-1: The file should be saved in a PDF version numbered sequentially and should comprise of the following items:

Packet-1:

Duly Completed Scanned PDF copy of, PAN, GST, Firm Registration certificate and Annexure-I to VIII with relevant supporting documents

Only the relevant documents as per the tender clauses are to be uploaded along with duly completed checklist as per the annexure-IX. Uploading of other than the required documents may liable for rejection of the bid.

Cover-2:

A standard BOQ format has been provided in excel format. Bidders are required to download the BOQ excel file and fill their financial offer on the same BOQ format. After filling the same, submit it online in excel format, without changing the financial template format.

Note:

If the bid is incomplete and / or non-responsive it will be rejected during technical evaluation. The bidder may not be approached for clarifications during the technical evaluation. So, the bidders are requested to ensure that they provide all necessary details in the submitted bids.

10. BID OPENING

- 10.1 Technical Bids will be opened on **22.06.2022** @ **15.00 Hrs.**
- 10.2 Financial Bids of the eligible bidders will be opened on a later date. The date and time for opening of Financial Bids will be announced later.
- 10.3 Bids should be summarily rejected, if tender is submitted other than through online or original tender fee/Bid security declaration are not submitted within stipulated date / time.

11. BID EVALUATION

Based on results of the Technical evaluation IIT Tirupati evaluates the Commercial Bid of those Bidders who gets qualify in the Technical evaluation. <u>The Commercial Bid with the lowest price will be the highest evaluated bid.</u>

11.1 Purchase Preference

I) Micro and Small Enterprises (MSEs):

Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) for goods produced and services rendered, may be provided following purchase preference:

Item wise	Price Quoted by MSE	How the tender shall be finalized
Quantity		
Cannot be split	L1	Full Order on MSE
Cannot be split	Not L1 but within L1 +	Full Order on MSE subject to matching L1
	15%	Price

II) Preference to Make in India

- a) In procurement goods or works which are covered under by para 3(b) of the extant Public Procurement (Preference to Make in India) Order 2017 dated 04 June 2020 and which are **divisible** in nature, the "Class-I Local Supplier" shall get purchase preference over "Class-II Local Supplier" as well as "Non-Local Supplier" as per following procedure:
 - i) Among all qualified bids, the lowest bid will be termed as L1. If L1 is "Class-I Local Supplier", the contract for full quantity will be awarded to L1.
 - ii) **If L1 bid is not a** "Class-I Local Supplier", 50% of the order quantity shall be awarded to L1. Thereafter, the lowest bidder among the "Class-I Local Supplier" will be invited to match L1 price for the remaining 50% quantity subject to the Class-I Local Supplier's quoted price falling within the margin of L1 + 20%,

and contract for that quantity shall be awarded to such "Class-I Local Supplier" subject to matching the L1 price. In case such lowest eligible "Class-I Local Supplier" fails to match L1 price or accepts less than the offered quantity, the next higher "Class-I Local Supplier" within the margin of L1 \pm 20% shall be invited to match the L1 price for remaining quantity and so on, and contract shall be awarded accordingly. In case some quantity is still left uncovered on Class-I local suppliers, then such quantity may be ordered on the L1 bidder.

- b) In procurement goods or works which are covered under by para 3(b) of the extant Public Procurement (Preference to Make in India) Order 2017 dated 04 June 2020 and which are **not divisible** in nature, and in procurement of services where the bid is evaluated on price alone, the "Class-I Local Supplier" shall get purchase preference over "Class-II Local Supplier" as well as "Non-Local Supplier" as per following procedure:
 - i) Among all qualified bids, the lowest bid will be termed as L1.

If L1 is "Class-I Local Supplier", the contract will be awarded to L1.

- ii) **If L1 is not a** "Class-I Local Supplier", the lowest bidder among the Class-I Local Supplier, will be invited to match the L1 price subject to Class-I Local Supplier's quoted price falling within the margin of L1 + 20%, the contract shall be awarded to such Class-I Supplier subject to matching the L1 price.
- iii)In case such lowest eligible Class-I Local Supplier fails to match the L1 price, the "Class-I Local Supplier" with the next higher bid within the margin of L1 + 20% shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the of Class-I Local Supplier within the margin of L1 + 20%, the contract may be awarded to the L1 bidder.
- iv) Class-II Local Supplier will not get purchase preference.

12. PAYMENT TERMS

No advance payment will be made in any case. Bills in Duplicate should be sent and the payment shall be released generally within 30 days, only after it is ensured that the items / quality of the items supplied are to the entire satisfaction of IIT Tirupati and completed the entire work within the stipulated delivery schedule. If any item is found defective, or not of the desired quality etc., the same should be replaced by the firm(s) immediately for which no extra payment shall be made.

13. WARRANTY OF QUALITY AND QUANTITY

- 13.1 The awardee shall give Minimum **3 years' on-site comprehensive warranty** from the date of installation on successful completion of supply, and acceptance of supplied items.
- 13.2 The awardee shall give warranty that all items are as per specification(s), conforming to the specified design and there are no defects in the process of manufacturing, packaging, transportation and delivery.
- 13.3 Upon receipt of notice from IIT Tirupati for defective material, the firm shall **within**15 days of receipt of the notice, replace the defective material, free of cost at the destination. The firm shall take over the defective material at the time of their replacement. No claim whatsoever shall lie on IIT Tirupati for the replaced goods thereafter. If the firm fails to replace the defective goods within a reasonable period, IIT Tirupati may proceed to take such remedial actions as may be necessary, at the company's risk and expense.

14. LIQUIDATED DAMAGES

In case of delay in Supply by the stipulated date, IIT Tirupati reserves the right of imposing penalty @0.5% per week on the value of the undelivered items subject to maximum 10% of the cost of undelivered items.

15. DELIVERY SCHEDULE

15.1 The successful bidder should execute the order successfully i.e. Supply, Installation of ordered item within **4 weeks** at IIT Tirupati transit campus, Venkatagiri Road, Yerpedu Post, Tirupati, Chittoor District from the date of issue of the purchase order. In case of any damage/Broken/Expired items found, the item(s) should be replaced within **15 days** at IIT Tirupati. The bidder has to make own arrangement for unloading and positioning of items at the desired location of IIT Tirupati.

16. PERFORMANCE SECURITY DETAILS

- The successful tenderer will have to deposit the performance security valid for 39 Months in the form of DD/TDR/FDR/Bank Guarantee @03% of the total order value at the earliest from the date of issue of the award letter. No interest will be paid by IIT Tirupati on the deposit.
- Performance Security will be refunded to the supplier, after it duly performs and completes the contract/warranty period in all respects.
- 16.3 Performance Security will be forfeited if the firm fails to perform/abide by any of the terms or conditions of the contract.

In case, the firm fails to execute the order successfully, within specified delivery period, the same goods/items will be procured from open market and the difference of cost, if any, will be recovered from Performance Security or from pending bill(s) of the defaulting firm or from both in case the recoverable amount exceeds the amount of Performance Security.

17. TERMS AND CONDITIONS

17.1 Termination for Insolvency

- The IIT Tirupati may at any time terminate the Contract by giving a written notice to the awarding firm, without compensation to the firm, if the firm becomes bankrupt or otherwise insolvent as declared by the competent Court, provided that such termination will not prejudice or affect any right of action or remedy, which has accrued or will accrue thereafter to the department.
- II) IIT Tirupati and/or the firm are entitled to withdraw/cancel the rate contract by serving one-month notice on each other. However, once a purchase order is placed on the supplier for supply of a definite quantity in terms of the rate contract during the validity of the rate contract, that purchase order becomes a valid and binding contract.
- III) The courts of Tirupati alone will have the jurisdiction to try any matter, dispute or reference between the parties arising out of this purchase. It is specifically agreed that no court outside and other than Tirupati Court shall have jurisdiction in the matter

17.2 Force Majeure

- Should any force majeure circumstances arise, each of the contracting parties be excused for the non-fulfilment or for the delayed fulfilment of any of its contractual obligations, if the affected party within 15 days of its occurrence informs in a written form the other party.
- II) Force Majeure shall mean fire, flood, natural disaster or other acts such as war, turmoil, sabotage, explosions, epidemics, quarantine restriction, strikes, and lockouts i.e. beyond the control of either party.

17.3 Arbitration

I) All disputes of any kind arising out in connection with the executing the order shall be referred by either party (IIT TIRUPATI or the bidder) after issuance of 30 days' notice in writing to the other party clearly mentioning the nature of dispute to a single arbitrator acceptable to both the parties. The venue for arbitration shall be IIT TIRUPATI India. The jurisdiction of the courts shall be Tirupati, Andhra Pradesh, India.

17.4 Other Conditions

- The bidder has to upload the relevant & readable files only as indicated in the tender documents. In case of any irrelevant or non-readable files, the bid may be rejected.
- II) IIT Tirupati will not be liable for any obligation or supplies made unless the Official Purchase Order has been placed by the Purchase Department.
- III) IIT Tirupati reserves the right to accept or reject any or all the tenders in part or in full or may cancel the tender, without assigning any reason thereof.
- IV) IIT Tirupati reserves the right to relax / amend / withdraw any of the terms and conditions contained in the Tender Document without assigning any reason thereof. Any inquiry after submission of the quotation will not be entertained.
- V) IIT Tirupati reserves the right to modify/change/delete/add any further terms and conditions prior to issue of purchase order.
- VI) In case the bidders/successful bidder(s) are found in breach of any condition(s) at any stage of the tender, Performance Security shall be forfeited.
- VII)False declaration/documents will be in breach of the Code of Integrity under Rule 175(1) (h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.
- VIII) Repeat Order: IIT Tirupati reserves the right to place repeat order up to 100% of the quantities within a period of 12 months from the date of successful completion of purchase order at the same rates and terms subject to the condition that there is no downward trend in prices.
 - To take care of any change in the requirement during the currency of the contract, a plus/minus option clause for 25 per cent is incorporated in the tender document, reserving purchaser's right to increase or decrease the quantity of the required goods up to that limit without any change in the terms and conditions and prices quoted by the tenderers.
- IX) Conditional tenders will not be considered in any case.
- X) In case of doubt in material, the expenditure on testing of equipment will be borne by the tenderer.
- XI) Institute reserve the right to increase/decrease the order quantity at any period of times during the validity of the contract.
- XII) IIT Tirupati may issue amendment/corrigendum to tender documents before due date of submission of bid. Any amendment/corrigendum to the tender document if any, issued by IIT Tirupati will be posted on CPP Portal. For the bidders, submitting bids on downloaded tender document, it is 'bidders' responsibility to check for any amendment/corrigendum on the website of IIT Tirupati or check for the same CPP Portal before submitting their duly completed bids.

UNDERTAKING

То

The Registrar,

Indian Institute of Technology Tirupati-Renigunta Road, Settipalli post, Tirupati 517506.

Tender No. IITT/CHEM/2022-23/28 dated: 01.06.2022.

Name of the Tender/Supply: Notice Inviting Tender for Supply, installation, testing and Commissioning of MF/UF Membrane system.

Sir,

I /we hereby submit our bid for Supply, installation, testing and Commissioning of MF/UF Membrane system.

I/ We enclosed here with the following in favor of Indian Institute of Technology Tirupati towards Tender Fee.

Particular	Amount	Payment Reference Details	Payment Date
Tender Fee (Including Tax)	1500/-		

- 1. I / We hereby reconfirm and declare that I / We have carefully read, understood & complying the above referred tender document including instructions, terms & conditions, scope of work, schedule of quantities and all the contents stated therein. I / We also confirm that the rates quoted by me / us are inclusive of all taxes, duties etc., applicable as on date.
- 2. I/we have gone through all terms and conditions of the tender document before submitting the same.

Date: Place:		Authorized Signatory
	Seal	Name:
		Designation: Contact No:

On Company Letter Head

Bid Security Declaration

To

The Registrar,

Indian Institute of Technology Tirupati-Renigunta Road, Settipalli post, Tirupati 517506.

Tender No. IITT/CHEM/2022-23/28 dated: 01.06.2022.

Name of the Tender/Supply: Notice Inviting Tender for Supply, installation, testing and Commissioning of MF/UF Membrane system.

Sir,

We, the undersigned declare that

- 1. We understood that, according to the tender conditions, bids must be supported by a Bid Security Declaration.
- 2. We accept that we will automatically be suspended from being eligible for bidding in any contract with the Institute for the period of **3 years** starting from the bid closing date, if we are in breach of our obligation(s) under the bid conditions, because we;
 - (a) have withdrawn our bid during the period of bid validity specified in the letter of bid; or
 - (b) having been notified of the acceptance of our bid by the institute during the period of bid validity, (i) fail or refuse to execute the contract, if required, or (ii) fail or refuse to furnish the performance security, in accordance with the tender conditions.

Date: Place:		Authorized Signatory
	Seal	Name:
		Designation: Contact No:

CERTIFICATE (To be provided on letter head of the firm)

I hereby certify that the above firm is not in the active debarred list by any Central/State Government/Public Undertaking/Institute nor is any criminal case registered / pending against the firm or its owner / partners anywhere in India.

I also certify that the above information is true and correct in every respect and in any case at a later date it is found that any details provided above are incorrect, any contract given to the above firm may be summarily terminated and the firm may be blacklisted.

Date:		Authorized Signatory
Place:	Seal	Name:
i iacc.		Designation: Contact No.:

a) Experience: (As per tender Clause No.4.2 (III)

Year	Name of the Item with Specification (Technical specification brochure to be	Purchase Order No. & Date (Copy of the Orders to be attached)	Date of successfully completion of SITC of ordered Item (copy of Installation report from client	Contact Details of Client
	attached)		to be attached)	
2017-18				
2018-19				
2019-20				
2020-21				

b) Past Performance: (As per tender Clause No.4.2 (III)

Year	Purchase Order No. & Date (Copy of the Orders to be attached)	Quantity	Date of successfully completion of SITC of ordered Item (copy of report from client to be attached)	Whether supplied item(s) is in successful operation for at least one year (Certificate from client to be attached)	Contact Details of Client [email and phone no]
2017-18			attacheu)	attacheu)	ПОЈ
2018-19					
2019-20					
2020-21					

Date :		Authorized Signatory
Place:	Seal	Name: Designation:
		Contact No.:

ANNEXURE – V

Annual Turnover and Profit Details:

	Evalu	ation Criteria		Remark	Specific page no. where the proof of documents are enclosed
Bidder's Annual	Financial Year	Turnover in Rs.	Annual Profit in Rs.	-	
Turnover and Profit for last	2020-21			Supporting Documents are to be	
three financial	2019-20			attached along with the Annexure-V [i.e. Audited financial	
years	2018-19			Statements or Financial Statements showing turnover duly signed by a Chartered	
	2017-18			Accountant are to be submitted]	

Date:		Authorized Signatory: Name:
Place:	Seal	Designation:
riace.		Contact No.:

Format for Self-Declaration under preference to make in India order

P-45021/2/2017-PP (BE-II) dated: 04 June 2020. We hereby certify that we M/s. (supplier name) are CLASS -
I/Class-II (Please specify clearly) supplier meeting the requirement of local content more than 20% as defined in above orders for the material against Enquiry No. IITT/CHEM/2022-23/28 dated: 01.06.2022.
Details of location at which local value addition will be made as follows: (Complete address to be mentioned)
Percentage of Local Content:
(As per the OM of Department of Promotion for Industry and Internal Trade No. P-45021/102/2019-BE-II-Part(1) dated: 04.03.2021. The bidders can't claim themselves as Class-Idocal suppliers/Class-II local suppliers by claiming the services such as transportation, insurance, installation, commissioning, training and after sales service support like AMC/CMC etc. as local value addition)
We also understand, false declarations will be in breach of the Code of Integrity under rule 175 (1) (i) (h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.
Seal and signature of Supplier
Seal and signature of Supplier Date :

Technical Compliance statement

Description				Compl	Remar	Offere	% of	Coun
					ks, if	d	Local	try of
						Make	Content	Origi
						&	as per	n
						Model	Tender Clause	
							No.4.2(
							V)	
MF/UF MEMBRANE SYSTEM - 01 Unit								
Detailed Specifications of MF/	UF Memb	orane	Systems					
The configurations of modules,	•	cesso	ories and					
membranes should include the f			- `					
Stirred cell with membran Spiral way of madule with								
2. Spiral wound module with3. Flat module with membra		•						
4. Hollow fiber module with	•		•					
5. Spare pumps (2 peristalti								
gaskets, pressure regulat		_						
Technical Specifications								
1: Stirred Cell								
Design Specifications	Design Specifications							
Parameter	Co	onditi	ons					
Max pressure	80 – 90		0113					
Membrane dia	40-50 m							
Processing volume	200 ml –		ml					
Hold up volume	2.0-1.5 r							
Tiola ap volume								
Scope of supply:								
								,
This specification is intended								
requirements to be met in the								
supply of DEAD END (STIRRED CELL) SET-UP.								
A typical stirred cell set up (1 set):								
Sr								
Description		Qty	Unit					
N o.								
Stirred Cell Set-up (Non								
1 Jacketed)		1	Set					
SS316L								

2	Flexible hose pipe (SS316)	1	No.
3	Magnetic stirrer	1	No.
4	Collection tank (1 – 1.5L)	1	No.
5	Weighing balance (Specification given separately)	1	No.
6	High pressure gas regulator with safety relief valve	1	No.

FLAT SHEET MEMBRANE RANGES:

Membr ane	MOC	Cut off	Quantity
MF	PES	> 100 kDa	1 each of flat sheet membrane sizes (table below of Sr. No. 1 &2)
UF	PES	1-500 kDa	1 each of flat sheet membrane sizes (table below of Sr. No. 1 &2)
	PA/PES/ any other suitable	< 500 Da	1 each of flat sheet membrane sizes (table below of Sr. No. 1 &2)

FLAT SHEET MEMBRANE SIZES

Sr. No.	Sizes	Wet/Dry
1	10-15" x 10-15"	Both
2	1 -1.5 m x 1-1.5 m	Both
3	Min. 800 linear foot roll	Dry

2 Lab Scale System (Spiral wound module)

DESIGN SPECIFICATIONS:

Parameter	Conditions	
Membrane Size	(1.5-2.0") Dia x (10-15")	
	length	
Membrane area	0.30-0.40 m ²	

Operating pressure	5 – 35 bar or better
(Please specify	
based on	
membrane)	
Operating pH	2 – 13
Operating temp	20 – 36 deg C or better

SYSTEM SPECIFICATIONS:

Sr.	Description		
No.			
1	Single compact design system to fit any spiral		
	organic membrane (MF, UF, FO)		
2	Inbuilt CIP capability		
3	Low process hold up volume of 1L (can be		
	lowered)		
4	Max. recovery of the material with min. dead hold		
	up		
5	All wetted part SS316L electro-polished		

SCOPE OF SUPPLY:

Sr. No.	Description	Qty	Unit
1.	Feed Cum CIP Tank, Plain Jacketed, Insulated, Top Flat and Bottom Cone SS316L - 5L	1	Set
2.	Triplex EPDM Diaphragm pump with VFD(VFD Make ABB/Equi)	1	No.
3.	Membrane housing	1	No.
4.	Pressure Transmitter	2	No.
5.	Temperature Transmitter	1	No.
6.	Flow Transmitter at Permeate	1	No.
7.	PLC panel (MOC: SS304) With 7" HMI	1	Set
8.	Interconnecting clamps, pipes and valves (high pressure)	1	Set
9.	Temp. Controlled circulating water bath (optional)	1	No.

SPIRAL MEMBRANE RANGES

Membr ane	MOC	Cut off
MF	PES	➤ 100 kDa
UF	PES	1 – 500 kDa
FO	PA/PES	< 500 Da

3: Lab Scale System (1 each of Hollow fiber (HF)/Forward Osmosis (FO)/ Plate & Frame (P&F)

DESIGN SPECIFICATIONS

Parameter	Conditions			
	HF	P&F	FO	
Available	0.05-0.15	0.010-	2.0-3.0 m ²	
area	m²	0.030 m^2		
Operating pressure	2 bar	4 bar	atm	
Operating pH	2-13	2-13	2-13	
Operating temp	20-50 deg C or better	20-36 deg C or better	20-36 deg C or better	

SYSTEM SPECIFICATIONS

Sr. No.	Description			
	Single compact design system to fit any HF			
1	(MF, UF, FO), plate & frame			
	housings/elements			
2	Inbuilt CIP capability			
3	Low process hold up volume of 1L (can be			
	lowered)			
4	Max. recovery of the material with min. dead			
	hold up			
5	All wetted part SS316L electro-polished			

SCOPE OF SUPPLY:

This specification is intended to cover the minimum requirements to be met in the design, manufacture and supply of non-flame proof fixed skid mount lab scale system – MF/UF/FO (ceramic/hollow fibre)

Sr. No	Description	Qty	Unit
1.	Feed Cum CIP Tank, Plain Jacketed, Insulated, Top Flat and Bottom Cone SS316L - 5L	1	Set
2.	5L collection tank- Plain SS316L	1	No.
3.	Centrifugal feed pump with VFD	1	No.
4.	Ceramic membrane housing	1	No.
5.	Plate & Frame holder with support disk and adjustable knobs	1	No.
6.	Pressure Transmitter Range :0-6 Bar(g)	3	Nos.
7.	Temperature Transmitter	1	No.
8.	Flow Transmitter at Feed & Retentate	2	Nos.
9.	PLC panel (MOC: SS304) With 7" HMI	1	Set
10.	Interconnecting clamps, pipes and valves	1	Set

Note: FO and HF WITHOUT REQUIREMENT OF any housing. They MAY come as an element to be used directly.

AUXILLARY ITEMS REQUIRED TO OPERATE IT AS P&F/FO:

Sr. No.	Description	Qt y	Unit
1	Draw Feed Tank, Plain Jacketed, Insulated, Top Flat and Bottom Cone SS316 - 5L	1	No.
2	For Feed Pump & Draw feed - Peristaltic pump	2	No.
3	Flow Transmitter at Permeate Line	2	No.
4	Pressure Transmitter Range :0-6 Bar(g)	1	No.
5	Interconnecting clamps, pipes and valves	1	Set

MEMBRANE RANGES AVAILABLE:

Membran e	MOC	Cut off	Dimension	Quantity
HF	PES/P	30, 150 kDa	400 mm length x 35	1 each
	AIN		mm ext. dia	

P&F	PES (MF)	➤ 100 kDa	20.5 cm length x 5.7 cm width	1 each of flat sheet membrane sizes (table below of Sr. No. 1 &2)
	PES (FO)	< 100 Da		1
FO	Proprie tary	< 100 Da	300 mm length x 50 mm ext. dia	1

FLAT SHEET MEMBRANE SIZES AVAILABLE:

Sr. No.	Sizes	Wet/Dry
1	10-15" x 10-15"	Both
2	1-1.5 m x 1-1.5 m	Both
3	Min. 800 linear foot roll	Dry

General Specifications:

Specification	Requirement		
Certifications	Standard certification such as CE, ISO 9001 etc. for quality test requirements; for energy efficiency and Environmental Impact.		
Power Supply	230v/50hz, 10 amps. Single phase.		
Warranty	3 Years from the date of Installation at IIT TIRUPATI		
Installation,	At IIT TIRUPATI		
commissioning and demonstration			
Training	The supplier of the equipment should provide hands on as well as operational training at the time of installation		
Supplier/Vendor should provide Catalogue in Original and indicating all Technical specifications, model and picture of the equipment The quoted model should be of latest technique and			
should not be more than 5 years old All Quoted Component/items/spare parts/accessories should be the same manufacture			

Equipment shall be installed & demonstrated at IIT TIRUPATI before acceptance			
Please Specify the Scope of Warranty:			
Spares and service availability: Minimum 5 Years should be provided .			

COMPANY DETAILS

Name of the bidder		
Date of Incorporation /		
Registration details		
PAN Number		
GST Registration Number		
Bidder's Bidding Capacity for the tendered items		
(As a Manufacturer/ Trader/ dealer / channel partner /		
system integrator, etc.)		
by bream minegration, etc.)	AANT	
	Account Number	
	IFS Code	
Bank Details	Bank Name	
	Branch Name	
Registered Office Address		
Authorized Signatory Details	Name	
(Company/Firm Authorization	Designation	
(Company/Firm Authorization by the competent authority, to	Email	
be attached)	Phone	
	Name	
Details of Contact other than	Designation	
Authorized Signatory	Email	
	Phone	
ite:		Signature and Seal of the Tende
ace:		Name in Block Letter:

Signature and Seal of the Tenderer:
Name in Block Letter:
Designation:
Contact no.

ANNEXURE-IX

CHECKLIST FOR BIDDERS TO BE SUBMITTED IN DULY FILLED AND SIGNED

Tender	Name of the Document	Document	Submitted	Page No. of
Clause		Particulars	(Yes/No)	the attached
No.				Document
3.1	Tender Fee			
3.4	Bid security Declaration (Annexure-II)			
3.3	Valid Tender Fee / EMD Exemption Certificate			
4.1.	PAN Card			
	Incorporation/Registration certificate of company			
	GST Registration copy			
4.2.(I)	Tender acceptance letter (Annexure I)			
4.2.(II)	Non-Blacklisting undertaking (Annexure III)			
4.2.(III)	The Supplier should have supplied a minimum of 3			
	similar system to other CFTI institutes like IIT or			
	IISER in last 3 years i.e. during 2017-18 to 2019-20			
	or 2018-19 to 2020-21 in India and Vendor should			
	provide satisfactory installation certificates with			
	product details as proof with customer contacts email and phone number as per the Annexure-IV .			
4.2.(IV)	The Annual Turnover should be at least Rs. 10 Lakhs			
4.2.(1 V)				
	and be profitable during each of the previous three			
	financial years i.e. during 2017-18 to 2019-20 or			
	2018-19 to 2020-21. Audited financial Statements or			
	Financial Statements showing turnover duly signed by			
	a Chartered Accountant are to be submitted as per the			
	Annexure-V.			
4.2.(V)	The bidder should be a Class-I/ Class II in line with			
	the Public Procurement (Preference to Make in India)			
	Order 2017 No. P-45021/2/2017-PP (BE-II) dated 04			
	Jun 2020. A Self-Declaration Certificate regarding			
	"Class-I & Class-II Supplier" for the tendered items as			
	per the Annexure-VI is to be submitted.			
4.2 (1/1)	-			
4.2.(VI)	The bidder should be OEM or OEM authorized			
	Dealers / Channel partners / Distributors of reputed			
	brand having authorization for sales and after sales			
	support. Valid OEM authorization letter is required to			
	participate in this tender.			
4.2.(VII)	Any bidder from a country which shares a land border			
	with India will be eligible to bid in this tender only if			
	the bidder registered with the competent authority.			
	The concerned bidder(s) are required to attach the			
	relevant valid Registration Certificate along with the			
	bid for consideration.			
4.3	Technical Compliance Statement : Annexure-VII.			
11.1 (I)	Purchase Preference: (if applicable)			
	Micro and Small Enterprises (MSEs):			

11.2 (II)	Purchase Preference: Make in India		
12	Payment Term: Within 30 days after SITC.		
13	Onsite Warranty: Minimum 3 years on-site		
	comprehensive warranty from the date of		
	installation.		
2	Spares and service support: Minimum 5 years from		
	the date of supply		
15	Delivery: FOR IIT Tirupati within 4 weeks		
8	Bid validity: 90 days from the date of opening of the		
	tender		
	Company details : Annexure-VIII		

Note:

- 1) Submission of tender without the above mentioned documents will lead to rejection/disqualification of the tender.
- 2) It is mandatary for the bidder to assign page numbers to the tender documents and the same has to be mentioned in the above checklist.

Signature of the bidder with stamp