**Prof. T. Pradeep Ref: CHY/TPRA/2017-2018/003/SPLX**

**Project Coordinator Dated: 18-08-2017**

**Limited Tender No: CHY/TPRA/2017-2018/003/SPLX**

**Technical Bid opening meeting on 08.09.2017 at 4.00 p.m.**

**Due Date: 07.09.2017, 5:00 pm**

Dear Sir/Madam,

On behalf of the Indian Institute of Technology Madras, offers are invited for the supply of **ELECTROSPINNING APPARATUS** conforming to the specifications given in (Annexure-I):

**Instructions to the Bidder**

**(i) Preparation of Bids: -** The Limited tenders should be submitted under two-bid system (i.e.) Technical bid and Financial bid.

**(ii) Delivery of the tender: -** The tender shall be sent to the below-mentioned addresses either by post or by courier so as to reach the following address before the due date and time specified in our Schedule:

**DEPT OF CHEMISTRY OFFICE**

**INDIAN INSTITUTE OF TECHNOLOGY MADRAS**

**SARDAR PATEL ROAD**

**CHENNAI - 600036 TAMIL NADU INDIA**

**(iii) Opening of the tender: -** The offer/Bids will be opened by a committee duly constituted for this purpose. The technical bids will be opened first and it will be examined by a technical committee which will decide the suitability of the bid as per our specifications and requirements. The bidders if interested may participate on the above mentioned tender opening date and time. In respect of opening of financial bid, those bidders who are technically qualified only will be called for.

**(iv) Prices: -** The price should be quoted in net per unit (after breakup) and must include all packing and delivery charges to various Departments/Centers/Institutions. The offer/bid should be exclusive of taxes and duties, which will be paid by the purchaser as applicable. However the percentage of tax & duties should be clearly indicated.

The price should be quoted without custom duty and excise duty, since I.I.T. Madras is exempted from payment of excise duty, and the custom duty will be paid at concessional rate against duty exemption certificate.

In case of import supply, the price should be quoted on EX-WORKS and CIP basis indicating the mode of shipment.

**(v) Agency Commission:** - Agency commission, if any, will be paid to the Indian agents in Rupees on receipt of the equipment and after satisfactory installation. Agency Commission will not be paid in foreign currency under any circumstances. The details should be explicitly shown in Tender even in the case of ‘Nil’ commission. The tenderer should indicate the percentage of agency commission to be paid to the Indian agent. The foreign Principal should indicate about the percentage of payment and it should be included in the originally quoted basic price, if any.

**(vi) Terms of Delivery: -** The item should be supplied to our Departments as per Purchase Order. In case of import supply, the item should be delivered at the cost of the supplier to our Institution. The Installation/Commissioning should be completed as specified in our important conditions.

**(vii) Technical Bid Opening:** The technical bid will be opened on 6th September 2017 at 4.00 p.m. at the Conference room, Department of Chemistry, IIT Madras and the financial bids of those tenders who are technically qualified will be opened at a later date under intimation to them.

**(viii)** IIT Madras reserves the full right to accept / reject any tender at stage without assigning any reason.

Yours sincerely,

**SCHEDULE**

**Important Conditions of the tender**

**1.** The due date for the submission of the tender is **07.09.2017, 5:00 pm**

**2.** The offers / bids should be submitted in two bids systems (i.e.) Technical bid and Financial bid. The Technical bid should consist of all technical details / specifications only. The Financial bid should indicate item-wise price for each item and it should contain all Commercial Terms and Conditions including Taxes, transportation, packing & forwarding, installation, guarantee, payment terms, pricing terms etc. The Technical bid and Financial bid should be put in separate covers and sealed. Both the sealed covers should be put in a bigger cover. The Limited Tender for supply of “**ELECTROSPINNING APPARATUS**” should be written on the left side of the outer bigger cover and sealed.

**3. EMD: -** EMD should be at 2% (two percent) of the tender value quoted by the bidder. The EMD should be included in the Financial bid which will not be opened for Technical evaluation. Enclosing the EMD in the Technical bid will automatically disqualify the tenderer. EMD should be in the form of DD in favor of “The Registrar, Indian Institute of Technology Madras” and payable at Chennai. The tender without EMD would be considered as UNRESPONSIVE and REJECTED. Photo/FAX copies of the Demand Draft/Banker’s pay orders will not be accepted. No interest will be paid for the EMD and the EMD (Bid Security) will be refunded to the successful bidder on receipt of Performance Security.

**4. Performance Security:-** The successful bidder should submit Performance Security for an amount of 5% of the value of the contract/supply. The Performance Security may be furnished in the form of an Account Payee DD, FD Receipt from the commercial bank, Bank Guarantee from any nationalized bank of India will be an acceptable.

**Only after submission of Performance Security, Purchase Order/Work Order will be released / L.C will be opened.**

**Performance Security in the form of Bank Guarantee:-** Incase the successful bidder wishes to submit Performance Security in the form of Bank Guarantee, the Bank Guarantee should be routed through the Beneficiary Bank to the end user bank. Otherwise, the Indian Agent of the foreign vendor has to submit a Bank Guarantee from a Nationalized Bank of India.

The Bank Guarantee should remain valid for a period of sixty days beyond the date of completion of all contractual obligations of the supplier including the warranty obligations.

**5.** If an Indian agent is involved, the following documents must be enclosed:

Foreign principal’s proforma invoice indicating the commission payable to the Indian Agent and nature of after-sales service to be rendered by the Indian Agent.

* Copy of the agency agreement with the foreign principal and the precise relationship between them and their mutual interest in the business.
* The enlistment of the Indian agent with Director General of Supplies & Disposals under the Compulsory Registration Scheme of Ministry of Finance.

**6.** The offer/bids should be sent only for a machine that is available in the market and supplied to a number of customers (renowned research/academic institutes in India and abroad). A list of customers in India and abroad with details must accompany the quotations. The bidder should have supplied at least one renowned research/academic institute in India. Quotations for a prototype machine will not be accepted.

**7.** Original catalogue (not any photocopy) of the quoted model duly signed by the principals must accompany the quotation in the Technical bid. No prices should ever be included in the Technical bid.

**8.** Documentary proof for the claimed position and repetition accuracies must be obtained from the principals and submitted along with the relevant pages of the standards.

**9.** Compliance or Confirmation report with reference to the specifications and other terms & conditions should also be obtained from the principal.

**10. Validity: -** Validity of Quotation not less than 90 days from the due date of tender.

**11. Delivery Schedule:-** The tenderer should indicate clearly the time required for delivery of the item. In case there is any deviation in the delivery schedule, liquidated damages clause will be enforced or penalty for the delayed supply period will be levied.

**12. Risk Purchase Clause:-** In the event of failure of supply of the item/equipment within the stipulated delivery schedule, the purchaser has all the right to purchase the item/equipment from other sources on the total risk of the supplier under risk purchase clause.

**13. Payment: -** No Advance payment will be made for Indigenous purchase. However 90% Payment against Delivery and 10% after installation are agreed to wherever the installation is involved. In case of import supplies the payment will be made only through 100% Letter of Credit i.e. (90% payment will be released against shipping documents and 10% after successful installation wherever the installation is being done).

**14. Advance Payment: -** No advance payment is generally admissible. In case of specific percentage of advance payment is required, the Foreign Vendor has to submit a Bank

Guarantee equal to the amount of advance payment and it should be routed through the Beneficiary Bank to the end user Bank. Otherwise, the Indian Agent of the foreign vendor has to submit a Bank Guarantee through a Nationalized Bank of India.

**15. On-site Installation: -** The equipment or machinery has to be installed or commissioned by the successful bidder within 15 to 20 days from the date of receipt of the item at site of IIT Madras. Installation should be done by the successful bidder in free of cost.

**16. Warranty/Guarantee: -** The offer should clearly specify the warranty or guarantee period for the machinery/equipment. Any extended warranty offered for the same has to be mentioned separately. (For more details please refer our Technical Specifications). At least one year warranty from the date of installation.

**17. Late offer: -** The offers received after the due date and time will not be considered. The Institute shall not be responsible for the late receipt of Tender on account of Postal, Courier or any other delay.

**18. Acceptance and Rejection: -** I.I.T. Madras has the right to accept the whole or any part of the Tender or portion of the quantity offered or reject it in full without assigning any reason.

**19.** Do not quote the optional items or additional items unless otherwise mentioned in the Tender documents / Specifications.

**20. Disputes and Jurisdiction: -** Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within the city of Chennai in Tamil Nadu.

**21.** All Amendments, time extension, clarifications etc., will be uploaded on the website only and will not be published in newspapers. Bidders should regularly visit the above website to keep themselves updated. No extension in the bid due date/ time shall be considered on account of delay in receipt of any document by mail.

**Acknowledgement: -** It is hereby acknowledged that the tenderer has gone through all the conditions mentioned above and agrees to abide by them.

**SIGNATURE OF TENDERER**

**ALONG WITH SEAL OF THE**

**COMPANY WITH DATE**

**Technical Bid opening meeting on 08.09.2017 at 4.00 p.m. (please refer point No. vii)**

**DEPARTMENT OF CHEMISTRY**

**Indian Institute of Technology Madras, Chennai – 600036.**

**Technical Specification for Electrospinning apparatus**

1. **High Voltage Power Supply:**
* Must be variable from 0 to 40 KV
* Must have both voltmeter and ammeter
* Should have a maximum current 1 mA
* A static removal device (Shorting Stick) must be provided
1. **Syringe Dispensers 3 Nos:**
* To dispense solution simultaneous or independently from 3 nos. of standard syringes 2, 5 and 10 mL
* Fabricated from insulating material and minimal metallic components to work under high voltage conditions and to avoid electric field distortions around the unit
* Motor control through micro controller to control and indicate the flow-rate
* All other specifications are same as Pump 1
* Two pumps are provided for spinning Core-­Sheath (Co-­Axial) Spinning where two different flow rates are to be set for core and sheath.
1. **Coaxial spinneret (OPTIONAL):**
* Spinneret for coaxial spinning
* Tubing to connect syringe with spinneret
* Only one syringe from Pump 1 can be used during co-axial spinning
1. **Collector Assemblies**
2. Drum collector:

Diameter 100 mm and length 300 mm with a variable speed from 300 to 3000 rpm.

1. Disc collector:

Diameter 100 mm

1. Conveyor collector:

Variable speed from 300 – 3000 rpm with a width of 300 mm and a total length of 700 mm. The system has a translation speed of 1 m/min

1. Cocoon collector:

A rod which is covered with fins and the fibres get collected on the edges of these fins

1. Plate collector

A standard plate collector with dimension of 300 mm x 300 mm

1. Parallel plate collector:

Plate collector with parallel plates perpendicular to the plate placed at about 12 mm gap. Fibres will be aligned at the tip of the parallel plates.

1. Motorized plate collector translation movement:

Provision for the plate to move 300 mm, digital display for the rate of movement with speed control. Provision for independent movement or linked with syringe translation pump stage.

1. **Syringe translation stage:**
* Syringe must move a total of 300 mm
* 150 mm on each side from the mean position
* Facility to limit movement from 10 to 150 mm independently on either side
* Digital display of rate of movement with speed control and maximum transverse speed of 250 mm/min
1. **Distance adjustment:**

Motorized distance adjustment between syringe and collector assembly

1. **Electrospinning enclosure:**

Construction:

Aluminium strut frame with glass/polycarbonate clear panel on the left side and front doors. All other panels made of Epoxy based insulated materials and aluminium sheets

Safety and additional features of cabinet:

1. With static removal device-residual charge discharge stick
2. Safety switch off HV power supply when door is opened
3. Hazard lamp to indicate that HV power supply is on
4. Proper cabin lighting and exhaust fan-ventilation emergency stop
5. Rubber floor mat for user safety
6. Stand-alone equipment
7. **Temperature and humidity display**

Digital meter, cabin heating up to 40 oC and dehumidifier dry air or Equivalent Make-OPTINOAL

1. **Spares**
2. Standard disposable syringes of 2, 5 and 10 mL 100 nos. each
3. Aluminium foil 100 nos
4. Sample nylon solution for electrospinning
5. One meter tubing for coaxial spinning
6. Necessary cables and connectors
7. Operation manuals and warranty card.