



INDIAN INSTITUTE OF TECHNOLOGY MADRAS
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Ref: CHE/13-14/123/DSTX/SRAT

Date: 30.09.2013

Tender No.: CHE/SRAT/018/2013

N.E. Nagaraj
Special Officer (Project Purchase)
IC&SR, I.I.T. Madras

Due Date: 21/10/2013, 3:30pm

Dear Sirs,

On behalf of the Indian Institute of Technology Madras, offers are invited for the supply of various Scientific Instruments such as “**Electrochemical Station and EQCM System**” conforming to the specifications given in Annexure.

D) Instructions to the Bidder

- (i) **Preparation of Bids:-** The 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 our office before the due date and time specified in our Schedule. The offer/bid can also be dropped in the tender box on or before the due date and time specified in the schedule. The tender box is kept in the office of the “Special Officer, Project Purchase” IC & SR Building 2nd floor, I.I.T. Madras, Chennai – 600 036.
- (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 financial offer/bid will be opened only for the offer/bids which technically meet all our requirements as per the specification.

- (iv) **Prices:-** The price should be quoted in nett 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 tax & duties should be clearly indicated.

The price should be quoted without custom duty and excise duty, since I.I.T. Madras is exempt 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 FOB and CIF 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.
- (vi) **Terms of Delivery:-** The item should be supplied to our destination in case of local supply. In case of import supply, the item should be shipped only to Chennai Airport. The Installation/Commissioning should be completed as specified in our important conditions.
- (vii) IIT Madras reserves the full right to accept / reject without assigning any reason.

Yours faithfully,



N.E. Nagaraj
Special Officer (Project Purchase)
IC&SR, I.I.T. Madras.

N.E. NAGARAJ
Special Officer (Project Purchase)
Centre for Industrial Consultancy & Sponsored Research
Indian Institute of Technology Madras
Chennai - 600 036

SCHEDULE

II) Important Conditions of the tender

1. The due date for the submission of the tender is **21/10/2013, 3:30pm**.
2. The offers / bids should be submitted in two bids system (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 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 / Open Tender for supply of "**Electrochemical Station and EQCM System**" should be written on the left side of the Outer bigger cover.
3. (i) EMD should be at 2% (Two percent) of the tender value quoted by the company. 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 favour 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.

(ii) The Successful bidder should submit Performance Security of an amount of 5% of the value of the contract. The Performance Security may be furnished in the form of an Account Payee DD, FD Receipt from the commercial bank, Bank Guarantee from commercial bank will be an acceptable.

(iii) The Performance Security 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.

4. If an Indian agent is involved, the following documents must be enclosed:
 - i) 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.
 - ii) Copy of the agency agreement with the foreign principal and the precise relationship between them and their mutual interest in the business.
 - iii) The enlistment of the Indian agent with Director General of Supplies & Disposals under the Compulsory Registration Scheme of Ministry of Finance.
5. The offer/bids should be sent only for a machine that is available in the market and supplied to a number of customers. A list of customers in India and abroad with details must accompany the quotations. Quotations for a prototype machine will not be accepted.
6. 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.
7. Documentary proof for the claimed position and reputation accuracies must be obtained from the principals and submitted along with the relevant pages of the standards.
8. Compliance or Confirmation report with reference to the specifications and other terms & conditions should also be obtained from the principal.
9. **Validity:** Validity of Quotation not less than 90 days.
10. **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.
11. **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.

12. **Payment:-** No Advance payment will be made for Indigenous purchase. However 90% Payment after Delivery and 10% after installation is agreed to wherever the installation is involved. In case of import supplies the payment will be made only through Letter of Credit and 90% payment will be released against shipping documents and 10% after installation wherever the installation is being done.
13. **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 Institution of IIT Madras.
14. **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.
15. **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 or any other delay.
16. **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.
17. **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.
18. **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.**

Quotation for an Electrochemical station and EQCM System

All quotes must be given in sealed envelopes before the deadline. Technical bid and financial bids must be in separate sealed envelopes (i.e. two bid system)

Technical Requirements:

1. Electrochemical station requirements:
 - a. Should consist of a Potentiostat, a galvanostat and Frequency Response Analyzer (FRA) for Electrochemical Impedance Spectroscopy (EIS)
2. FRA requirements:
 - a. Frequency range: at least 10 micro Hertz to 1 Mega Hertz
 - b. AC voltage amplitude range: at least 5 mV to 20 mV (rms)
 - c. Single sine EIS for the entire frequency range
 - d. Potentiostatic EIS
 - e. Galvanostatic EIS
3. Potentiostat and galvanostat Requirements:
 - a. Digital Analog Converters (DAC) resolution: at least 16 bit
 - b. Current range: 10 nA to 1 A (or wider)
 - i. Must be able to do impedance measurement at 1A and in the whole frequency range
 - c. Current Resolution: 10 pA or better
 - d. Voltage range: at least +/- 8V
 - e. Measured voltage resolution: 10 micro volts or better
 - f. Electrometer input bias current (leakage current) < 10 pA
4. Data Acquisition and Analysis (Software) Requirements:
 - a. Electrochemical Impedance Spectroscopy (EIS)
 - b. Cyclic Voltammetry, Corrosion studies (Tafel Plots) data acquisition and analysis.
 - c. Open circuit potential vs time
 - d. Potentiostatic operation including potential steps
 - e. Galvanostatic operation
5. Electrochemical Quartz Crystal Microbalance requirements
 - a. EQCM with frequency between 1 to 10 MHz.
 - b. Cell to be included (Static type: can be dip type or well type)
 - c. Oscillator box to be included.
 - d. Two Au polished electrode and O-ring (if needed) for crystal fixture
 - e. Au or Pt counter electrode and Ag/AgCl reference electrode
6. Computer control Requirements:
 - a. Computer controlled operation and data acquisition (USB port). Include the cost of the data acquisition board, if any.
 - b. Can be used with Intel ® processor based computer and Windows® 7 operating system
7. Other requirements

- a. All cables necessary to connect the equipment (Electrochemical station and EQCM) with computer must be supplied
- b. Manual to be included
- c. Power Supply: Capable of operating with 230 V, 50 Hz supply
- d. Specifications for computer needed to be used with the equipment and the software

The following optional accessories to be quoted separately.

1. Electrochemical cell for three electrodes
 - a. At least 20 ml volume
 - b. With Pt wire or mesh counter electrode
 - c. Ag/AgCl reference electrode.
 - d. Facility to allow gas inlet/outlet
2. High current booster
 - a. Up to 2A
3. Low current option
 - a. Resolution 300 aA
 - b. Measurement range 100 pA
4. EIS related software
 - a. Circuit fitting software for EIS data analysis
 - b. KKT compliance test
5. Pulse voltammetry
6. EQCM accessories
 - a. 25 Cu coated resonators (standard finish) with active area diameter of 1 cm
 - b. 25 Au coated resonators (standard finish) with active area diameter of 1 cm
 - c. 25 uncoated resonators (in which material can be coated for a diameter of 1 cm)
 - d. Flow cell
 - e. Pump and tubing to transport fluid from/to a beaker, for the flow cell

Also indicate:

1. Warranty (minimum 1 year, preferably 2 years)
2. Validity period of the quote
3. Tax, shipping and handling charges (CIF Chennai)
4. Delivery Time
5. Payment terms

Please list the compatibilities with the required specifications in a TABULAR FORMAT.