

**Dr. M. N. Dastur School of Materials Science and Engineering (MND-SMSE)**

**Indian Institute of Engineering Science and Technology,**

**Shibpur, Howrah-711 103**

**Advt. No: SE/D(AA)/17/71 dated 21.09.2017**

**Notice Inviting Quotations**

Sealed quotations are invited for the supply of a multi-parameter pH-conductivity meter as per the technical specification provided in section II. The relevant bidding document can be downloaded from the website. The document can be also obtained from the MND-SMSE between 11.00 a.m. and 4.00 p.m. on all working till 19<sup>th</sup> October 2017. Sealed quotations should be submitted at the office of the MND-SMSE during office hours on or before 4:00 pm of 20/10/2017. The quotation should include All COSTS including the delivery charges of the item/s to MND-SMSE, Indian Institute of Engineering Science & Technology, Shibpur.

Dean (Administration)

This is downloadable

**Indian Institute of Engineering Science and Technology,  
Shibpur, Howrah-711 103**



**BIDDING DOCUMENT**

**(Ref. Advt. No.: SE/D(AA)/17/71 dated 21.09.2017 )**

*For Supply of*

Multi-parameter pH-conductivity meter

**Under**

Plan Grant

Allotment Head: 08000000-52-50

Sanction letter No. 1718/52/149 dated 20/06/2017

Dr. M. N. Dastur School of Materials Science and Engineering

## **SECTION I: Terms & Conditions and Important Instructions for Bidders**

1. Bidders are to collect the tender documents with technical specifications for tendered items from the office of Dr. M. N. Dastur School of Materials Science and Engineering (MND-SMSE) between 10.30 a.m. to 3.00 p.m. from **21<sup>st</sup> September** to **19<sup>th</sup> October, 2017** except Saturday, Sunday and other public holidays (Please consult list of holidays in the university website [www.iiests.ac.in](http://www.iiests.ac.in) for details). Bidding documents may also be downloaded from the website ([www.iiests.ac.in](http://www.iiests.ac.in)) and quotations may be submitted as per instructions in the document.
2. The last date of receipt of Bids is **20<sup>th</sup> October, 2017** up to **4.00 p.m.** Bids received later will not be entertained under any circumstances.
3. Date and time of opening of bids is **23<sup>rd</sup> October, 2017** at **11.30 a.m.** and the place of opening of bid is the **sub-library of MND-SMSE, IEST, Shibpur, Howrah-711103.**
4. Bidders are to submit the tenders in **sealed envelope** at the following address:  
Tender No.: SE/D(AA)/17/71 dated 21.09.2017  
Prof. S. Chatterjee  
Head, Dr. M. N. Dastur School of Materials Science and Engineering  
Indian Institute of Engineering Science and Technology, Shibpur  
Howrah-711103.
5. All bids should be submitted in ONE-BID (TECHNO-COMMERCIAL BID) Format in covers (Advt. No. must be mentioned on cover).
6. All bids should be submitted giving **detailed specifications**, international standards (BIS/international), catalogues, list of users & technical details / **operating parameters, pre-installation requirements, payment terms, warranty**, etc.
7. Prices quoted should include **costs of ALL necessary spares** and **accessories** as well as **installation** and **other incidentals** that are necessary to make the equipment working and functional with all its capabilities.
8. All Vendors / Agents must submit **full details and requirements for installation & commissioning** of the equipment as per technical specifications submitted by them, including information about: (i) Water supply (Filtered, Flow rate) required; (ii) Ambient temperature and/or atmosphere control, if required, as applicable; (iii) Electrical and power requirements; and (iv) Any special requirements for installation of the equipment at the designated place.

9. Bidders are required to submit, along with the quotations, Original Manufacturer's catalogue mentioning Brand and Model No. (if applicable) with dimensions.
10. Bidders must attach the at least **03** Purchase Order copies for Supply & Installation of above equipments during the last **02** financial years in Central Government/Central Autonomous Body/Central PSU/State Government or Autonomous/Reputed Private Research Centres (in Nos. and Value). Please attach a list of clients.
11. The price quoted should be **inclusive of ALL taxes, duties, levies and transportation**. Inclusion of tax/levy at a later stage will not be accepted. Freight, insurance charges should be clearly indicated. **Nothing extra will be paid** in addition to the quoted rate.
12. In case of imported equipment the local agents are to quote the price in foreign currency.
13. The supply of above equipments should be made at Dr. M.N. DASTUR SCHOOL OF MATERIALS SCIENCE AND ENGINEERING, IEST, SHIBPUR and supply means "Supply, Installation, Commissioning and satisfactory demonstration of the whole equipments". If any charges extra are payable for Installation and Commissioning, the same should be specified in the commercial offer.
14. The supplier / manufacturer shall provide **training** in operation and application of the instrument for the R&D work to user scientists and/or scholars at IESTS, if required.
15. The materials are to be supplied at a place within IESTS premises between 11.00 a.m. and 4.00 p.m. The **bidder will be responsible for any breakage, damage or defect in the equipment** detected subsequently. The **supply and installation** of the equipment should be **completed within** a period not exceeding **2 months** from the placement of the formal work order or opening of the LC, failing which appropriate action will be taken as per institute rules.
16. If the supply is not completed within the stipulated period as indicated in the work order, a Liquidated Damage @  $\frac{1}{2}$  per cent per week will be imposed subject to maximum of 5% of the value of work order.
17. If the net price of the equipment is above Rs.2,00,000 then that instrument/equipment will not be considered.
18. Bidders are required to submit self-attested photocopies of valid Trade-License, Professional tax, VAT-Registration, PAN Card and latest IT-Return Certificates.
19. For the proprietary items, the bidders/manufacturers should submit proper proprietary certificate.

20. (a) For Indian purchase: **Bills in triplicate** should be presented for payment within **15 days of supply/completion** of work. **No advance payment can be made.** All bills are to be accompanied by order copies and Challan receipt.

**Or**

(b) For Foreign purchase:

Payment will be made through Letter of Credit/Bank Transfer. AWB, Packing list, Warranty certificate, etc should be provided.

21. Tender has to be kept valid for acceptance for a period of 6 months without any modifications in its terms and conditions.

22. Supplier should mention their details of service setup and manpower in Kolkata / Howrah, who are responsible for after sales support. **Response time** should be **within 24 hours.**

23. **Earnest money deposit (EMD) @ 2%** of the quoted price in the form of Demand Draft / Pay Order drawn in favour of the "**Registrar, IEST, Shibpur**" and payable at **Kolkata** shall have to be paid together with the Bid, failing which, unless otherwise exempted by any rule, the bid shall not be entertained.

24. The Institute may accept bids without EMD from those bidders who are registered with the Central Purchase Organization, National Small Industries Corporation (NSIC) or the concerned Ministry or Department as Manufacturer. To claim the exemption, the bidder must be offering goods manufactured by them. Submission of EMD exemption certificate is mandatory. Exemption will not be granted in case the bidder is acting as an agent for some other vendor.

25. EMD of the successful bidder will be refunded after successful completion of installation. EMD of the other bidders will be refunded after one week following the opening of the bids. No interest is payable on EMD. Bidders are requested to collect their EMDs from the office of MND-SMSE.

26. IEST, Shibpur will issue customs duty exemption certificate or excise duty exemption certificate for foreign purchase, if required.

27. The Bids should be submitted along with this tender document with the terms & conditions duly signed by the proprietor/ partner/director of the company as a token of acceptance of terms & conditions of tender.

28. Warranty/guarantee for all the items of equipment supplied shall be on 'all comprehensive' basis (i.e., including repairs, replacements, maintenance, etc.).

29. The minimum applicable period of all comprehensive warranty for all items of **equipment** shall be **24 (twenty four) months**, unless mentioned otherwise, from the **date of installation**.
30. **Indian Institute of Engineering Science and Technology, Shibpur, reserves the right to accept / reject all or any of the tenders without assigning any reason whatsoever. Indian Institute of Engineering Science and Technology would not be under any obligation to give any clarifications to those vendors whose tenders have been rejected. The decision of Director, IEST Shibpur is final and binding in case of any dispute arising out of this contract between both the parties. IEST will not provide any accommodation/transportation for the engineers/ representatives for attending installation, commissioning and demonstration work. It is the absolute responsibility of the Principal Supplier/Indian Agents to make their own arrangements.**

We accept the above terms and conditions.

Dated:

Signature of Bidders/Suppliers

With date & Seal

## SECTION II: TECHNICAL SPECIFICATIONS

### ITEM: Multi-parameter pH-conductivity meter

#### Item Specifications:

pH range	-1.999 ~ +19.999 pH
pH resolution	0.1 / 0.01/0.001 pH
pH accuracy	±0.005 pH (±1 digit)
pH calibration	5 points auto calibration
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mV (ORP) range	-1999.9 ~ +1999.9 mV
mV resolution	0.1 mV
mV accuracy	±0.2 mV (±1 digit)
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Ion meas. range	0.00 µg/L ~ 999 g/L (mol/L)
Ion resolution	3 significant digits
Ion accuracy	±0.5% F.S (±1 digit)
Ion calibration	5 points
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Conductivity range	0.1 µS/cm ~ 1999.9 mS/cm
Cond. resolution	0.05% F.S
Cond. accuracy	±0.5% F.S (±1 digit)
Temp. Coefficient	0.0% ~ 10.0% (selectable)
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TDS range	0.01 mg/L ~ 1000 g/L
TDS resolution	0.01 mg/L
TDS accuracy	±0.1% F.S
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Temperature range	-30.0 ~ 130.0 °C
Temp. resolution	0.1 °C
Temp. accuracy	±0.1 °C (±1 digit)
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- Standard feature of equipment to be supplied
  - Simultaneous dual channel measurement of pH/ORP/Ion/Conductivity/TDS/Resistivity/Salinity along with temperature
  - Automatic pH buffer recognition (USA/NIST or customized)
  - Automatic electrode test during calibration
  - Automatic and manual temperature compensation
  - Auto conductivity ranging and unit selection
  - Set point alarm, Upper / lower limit alarm,
  - Large 5.5 inch LCD, dual channel display
  - Non-volatile memory of 999 sets of data
  - Data transfer facility to computer and printer

- GLP/GMP compliance with real-time clock date, time, user ID stamp on result
- 360<sup>0</sup> movable electrode holding arm
- Standard Buffers/solutions for pH and Conductivity and electrode refill KCl solution
- Universal AC (100 - 240 V) Adaptor
- Warranty: 2 years

- Specification for pH Electrode

- Refillable glass body pH electrode
- In-built reference electrode with increased sensitivity
- Built-in temperature sensor, 0 - 100 <sup>0</sup>C
- pH range: 0-14 pH
- Waterproof, lead free

- Specification for Conductivity Cell

- Immersion type glass cell
- Conductive materials: Platinum rings coated with platinum black
- Cell constant: 1 cm<sup>-1</sup>
- Built-in temperature sensor, 0 - 100 <sup>0</sup>C
- Cond. range: 1  $\mu$ s/cm ~ 100 ms/cm