



# भारतीय प्रौद्योगिकी संस्थान (भारतीय खनि विद्यापीठ), धनबाद

धनबाद, झारखण्ड, भारत, पिन-826004

(मानव संसाधन विकास मंत्रालय, भारत सरकार के अधीन राष्ट्रीय महत्व का एक संस्थान)

INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES), DHANBAD

DHANBAD, JHARKHAND, INDIA, PIN-826004

(An Institute of National Importance under Ministry of H.R.D., Govt. of India)

STORES & PURCHASE SECTION Phone:(0326) 2235678 || Email : purchase@iitism.ac.in || Website : www.iitism.ac.in

No. Chemical/INS/242/18-19

Date: 3 October 2018

## NOTICE INVITING TENDER

### **Subject: Supply & Installation of Temperature Measurement and Calibration Setup**

Indian Institute of Technology (Indian School of Mines), Dhanbad invites quotations for the following to be supplied and delivered in Chemical Engineering Department.

S No	Full Description of items/ store	Qty	Delivery
1	<b>Supply &amp; Installation of Temperature Measurement and Calibration Setup.</b>  (Detailed Specification is given in Annexure – I)	01 No.	At the Earliest

### Tender Schedule

Particulars	Date & Time
<b>Tender Fees*</b>	<b>Rs. 590.00 (Five Hundred &amp; Ninety Only)</b>
Bid Security or Earnest Money Deposit	<b>Rs. 20,000.00 (Twenty Thousand Only)</b>
Last date and time for submission of tenders	<b>02.11.2018 at 1:00 P.M.</b>
Date and time of opening of tenders	<b>02.11.2018 at 4.00 P.M.</b>

\* For submission of tender cost please see the point no. 06 Terms & Conditions.

Tender document containing following document is available on websites of (<https://eprocure.gov.in> & [www.iitism.ac.in](http://www.iitism.ac.in)), which may kindly be referred.

1. You are requested to quote your lowest rates for the supply of above items in the attached format for Financial Bid (Annexure – II)
2. You may send your representative in the office of the undersigned at the scheduled date and time of opening of tender.
3. Tender should be submitted in sealed cover only superscribed with Enquiry No. and due date at the following address only:

*The Assistant Registrar (P&S)*  
*Indian Institute of Technology (Indian School of Mines),*  
*Dhanbad – 826 004 Jharkhand*



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## Terms & Conditions

- 1) The rates should be quoted for each item separately.
- 2) Conditional offer will not be accepted.
- 3) IIT (ISM) does not issue any Form 'C' or 'D' towards sales tax concessional rate. Hence, full rate of sales tax/VAT, GST applicable should be quoted.
- 4) Since IIT(ISM) Dhanbad is an Indian Institute of Technology and subject item will be used for research, hence benefit of reduced rate of GST should be considered if applicable.
- 5) **Educational discount**, if any, should be clearly mentioned.
- 6) Earnest Money Deposit (EMD): Should be submitted in form of A/C payee demand draft drawn in favor of Registrar, IIT(ISM) and payable at SBI, IIT (ISM) campus branch or any other Bank/ Branch located in Dhanbad and Tender Fees must be paid through SB collect only through the link <https://www.onlinesbi.com/prelogin/collecthome.htm?corpID-272342>, tender cost payments through other modes viz. Cash/DD/NEFT/RTGS etc. shall not be accepted. Online payment receipt should be enclosed with Tender Document.
- 7) You are requested to submit your quotation strictly as per the specifications mentioned in the NIT.
- 8) Your tender must be valid for **minimum 90 days** from the date of opening of tender.
- 9) Please mention warranty/ guarantee in your offer clearly. Material/ equipment to be supplied must have minimum warranty/guarantee of **36 months**.
- 10) Each page in the bid document must be numbered properly and duly signed & sealed by the bidder on every page of the bid.
- 11) **The items/ materials shall be required to be delivered at Chemical Department/ Section through Purchase & Store Section, IIT (ISM) Dhanbad at the risk and cost of the tenderer.**
- 12) Unloading and installation shall be the complete responsibility of the supplier.
- 13) The stores are required to be delivered within 30 days. Late delivery may not be accepted.
- 14) The items offered should be of good quality confirming to BIS standards, wherever applicable.
- 15) **Advance payment is not admissible.** Payment shall normally be made within 30-45 days subject to receipt and acceptance & installation of the ordered materials/items PBG and other documents.
- 16) Successful bidders will have to submit Performance Security (PBG) in the form of Bank Guarantee as per the Purchase Order before releasing payment.
- 17) In the event date on which the tender is opened for acceptance is declared to be a holiday, the tenders shall be deemed to remain open for acceptance till the next working day.
- 18) Please send your sealed offer by Regd. Post/ Speed Post/ Courier only along with Courier receipt. By hand delivery of the tender will not be accepted. Tender/ quotation will be received during IIT (ISM) working hours only (i.e. Monday to Friday). *Late or delayed tenders shall be summarily rejected.*
- 19) Any other information that you may like to obtain, you are free to contact IIT (ISM) before submission of tender.
- 20) IIT (ISM) reserves the right to accept and/or to reject any/ all tenders without assigning any reason.

Assistant Registrar



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## Annexure-I

### Technical Specification for Temperature Measurement and Calibration Setup.

- Bench-mounting unit with built-in and properly insulated water heater tank (size: 1.0-5 L) with rated immersion heater and with protective guards for safe experiments and drain tap
- Water heater Tank MOC: SS304 or equivalent
- Bath temperature uniformity:  $\pm 0.1^\circ\text{C}$  or better
- The water heater tank should include a water level float switch and a safety temperature cut-out switch to turn off the heater in case of low water level
- Thermowell to study temperature lag
- Built-in pressure sensor (barometer) with display of local water boiling temperature
- Sockets on the front panel to connect to electronic circuits. Sockets should include resistances to simulate a resistance device and to show the problems of adding resistances to the circuits
- The electronic circuits should also include: (i) an amplifier to increase the output of the thermocouples for more useful voltage measurement and (ii) constant current and voltage sources, and a resistive bridge
- A multiline display that should work with the electrical resistance and thermocouple devices
- Automatic data acquisition system with compatible hardware, software and interfacing and other accessories for simple and reliable real-time digital data recording and processing of results on a PC
- **Temperature measuring devices:**
  - (i) Pt100 platinum resistance thermometers (four wire) as a reference to accurately calibrate the other devices
  - (ii) J, K, and other type thermocouples
  - (iii) NTC thermistor
  - (iv) Two liquid in gas thermometers
  - (v) Bimetal and gas (vapor) PRESSURE thermometers
  - (vi) Liquid crystal temperature indicator strip (for reference purpose only)
  - (vii) Hand-held infrared thermometer
- **Computer:**

Processor: Core i5, Hard Disk: 500 GB, RAM: 4GB, Monitor- 22 inch LED, Keyboard, Mouse, USB ports, Compatible Windows OS (Latest version), etc.
- All the necessary items required for the operation of equipment are to be quoted and supplied.
- **All materials used in the instrument/equipment should be of highest quality:** Industrial grade SS (e.g., SS304) should be used for wetted parts such as tanks, pipes, tubes, fittings etc. Structural component MOC should be of MS or better
- Warranty: minimum 3 years and provisional AMC after warranty period





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Annexure - II

## Format for Financial Bid

NIT No.: Chemical/INS/242/18-19

Date: 3 October 2018

Bidders Ref: No.

Date:

GSTIN No.:

**Subject: Supply & Installation of Kit for Study of Percentage Differential Relay.**

Sl. No.	Full Description of Items with (HSN Code/SAC Code)	Qty.	Rate	Amount
			Packing & Forwarding (if any)	
			<b>Total</b>	
			GST	
			Freight (if any)	
			Installation (if any)	
Amount should be in figure as well as word			<b>Grand Total</b>	

### Note:

- 1) Price basis must be FOR IIT(ISM) Dhanbad only.
- 2) All the details must be provided as per prescribed format only.
- 3) Prices quoted by the bidders should include all local taxes, VAT, service tax, GST, HSN Code, SAC Code, livies, transportation cost and insurance costs etc. if any