



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

File No. TEQIP/500402/17-18

Date: 23 March, 2018

Request For Quotation

To,
M/s

Subject: Supply & Installation of Impedance Analyser - 4 Hz to 5MHz with compatible four terminal probe - DC to 8 MHz

Sirs,

The Indian Institute of Technology (Indian School of Mines), Dhanbad is interested for the purchase of the materials/ equipment listed below:

S No	Description of item(s)	Quantity	Remarks
1	Supply & Installation of Impedance Analyser - 4 Hz to 5MHz with compatible four terminal probe - DC to 8 MHz (Detail specification in Annexure I)	01 No.	At the earliest/ Ex-stock

Tender Schedule:

Particulars	Date & Time
Last date and time for submission of tenders	20.04.2018 at 1:00 P.M.
Date and time of opening of tenders	20.04.2018 at 4.00 P.M.

INSTRUCTIONS:

- 1) Please attach relevant technical literature of the item.
- 2) Please mention warranty/ guarantee period in your offer.
- 3) Please mention after sales service information in your offer.
- 4) Price should be in F.O.R. IIT(ISM), Dhanbad basis only.
- 5) **Please attach a certificate that the quoted price is not more than that of any other Govt. organization/ institution in India. This has to be mentioned in the offer letter clearly.**
- 6) The rates should be quoted for each item separately.
- 7) Rates quoted will be taken as inclusive of all taxes unless given separately. 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.
- 8) The items/ materials shall be required to be delivered at Mining Machinery Engineering Department, IIT(ISM), Dhanbad at the risk and cost of the tenderer.
- 9) Your tender must be valid for minimum 55 days from the date of opening of tender.
- 10) The stores are required to be delivered within 90 days, late delivery may not be accepted.
- 11) Full details of stores offered should be given in the tender along with supporting & relevant literatures/ Technical Literature.
- 12) Sales Tax/ VAT Registration Number, GSTIN should be clearly mentioned in your offer, failing which your offer may not be considered.
- 13) The items offered should be of good quality confirming to BIS standards, wherever applicable.
- 14) **Advance payment is not admissible.** Payment shall normally be made within 3-4 weeks subject to receipt and acceptance & installation (as per Purchase Order Terms) of the ordered materials/items.
- 15) **Performance Bank Guarantee:** Performance Security/Performance Bank Guarantee: Performance Security has to be submitted from the successful bidder. Performance Security should be 10% of the ordered value. Performance Security may be furnished in the form of Bank Guarantee/Demand Draft from any Nationalized Bank only and. Performance security should remain valid for a period of two months beyond the date of completion of all contractual obligations of the successful bidder(s). No interest will be payable by IIT (ISM) Dhanbad on the Performance Security deposited. In case the contractor fails to provide satisfactory service, the Performance Security submitted by the bidder(s) is liable to be forfeited. An undertaking to this is to be submitted.
- 16) In the event of the supplier failed to supply the materials or install the same as contractual condition, IIT (ISM) shall have the right to deploy suitable agency/ third party to get the job completed at the risk and cost of the supplier.
- 17) Tender may please be submitted in sealed cover only superscribed with Enquiry No. TEQIP-500402-2017-18 and due date as is 20.04.2018.
- 18) Your bid should reach our office preferably latest by 20.04.2018.
- 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.

[Signature]
23/3/18
Assistant Registrar



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Annexure I

Specification of Impedance Analyser

- Measurement frequency: 4Hz to 5MHz (5 digits setting resolution, minimum resolution 10 mHz)
- Required to perform high-speed continuous measurement under different measurement conditions.
- Output impedance:
 - Normal mode: 100 Ω
 - Low impedance high accuracy mode: 10 Ω
- Measurement time: 0.5 ms maximum
- Memory to store the at least 32000 measurements data as well as facility of storage through USB flash drive.
- Interface : EXT I/O, RS-232C, GP-IB, USB (Hi-Speed), USB flash drive, LAN.
- Impedance analyser must be capable of measuring following parameters: Impedance(z), Admittance(Y), Phase angle(θ), Series-equivalent resistance(R_s), Parallel-equivalent Resistance(R_p), DC resistance(R_{dc}), Reactance(X), Conductance(G), Susceptance(B), Series-equivalent static capacitance(C_s), Parallel-equivalent static capacitance(C_p), Series-equivalent inductance(L_s), Parallel-equivalent inductance(L_p), $\tan\delta$ Loss coefficient(D), Q factor(Q).
- Measurement modes:
 - LCR mode: Measurement with single condition
 - Analyzer mode: Sweeps with measurement frequency and measurement level
 - Measurement method: normal sweep or segment sweep,
 - Display: List display or graph display
 - Continuous measurement mode: Measures under saved conditions continuously (minimum of 30 sets)
- Display range
 - Z, Y, R_s , R_p , R_{dc} , X, G, B, L_s , L_p , C_s , C_p : $\pm(0.000000$ [unit] to 9.999999 [unit]
 - Absolute value display for Z and Y only
 - θ : $\pm(0.000^\circ$ to $180.000^\circ)$
 - D : $\pm(0.000000$ to $9.999999)$
 - Q : $\pm(0.00$ to $9999.99)$
 - $\Delta\%$: $\pm(0.0000\%$ to $999.9999\%)$
- Basic accuracy for measuring impedance = $\pm 0.08\%$
- Support for high-speed switching of measurement conditions.
- Power supply: 180 to 260 V AC, 50 Hz.
- Display: 5.7-inch colour TFT, display is capable to set into ON/OFF.
- No. of display digits setting: from 3 to 7.
- Measurement speed: FAST/MED/SLOW.
- DC bias measurement: Normal mode: 0 VDC to 2.50 VDC (10 mV steps)
 - Low impedance high accuracy mode: 0 to 1.00 VDC (10mV steps)
- BIN measurement: 10 classifications and out of range for 2 items.
- Compensation: Open/short/load/cable length of 0 and 1 m/correlation compensation.
- Trigger synchronous output function: Applies a measurement signal during analog measurement.
- Interval measurement 100 μ s to 10,000 s, minimum 800 points.

Specification of compatible four terminal probe

- Cable length 1 m minimum
- Frequency Range of operation is from DC to 8 MHz.
- Characteristic impedance = 50 Ω .
- 4-terminal pair design.
- Measurable conductor diameter: 0.3 to 5 mm

23/3/18



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FORMAT FOR QUOTATION SUBMISSION (In letterhead of the supplier with seal)

Date: _____

To: _____

Sl. No.	Description of goods (with full Specifications)	Qty.	Unit	Quoted Unit rate in Rs. (Including Ex Factory price, excise duty, packing and forwarding, transportation, insurance, other local costs incidental to delivery and warranty/ guaranty commitments)	Total Price (A)	Sales tax and other taxes payable	
						In %	In figures (B)
Total Cost							

Gross Total Cost (A+B): Rs. _____

We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs. _____ (Amount in figures) (Rupees _____ amount in words) within the period specified in the Invitation for Quotations.

We confirm that the normal commercial warranty/ guarantee of _____ months shall apply to the offered items and we also confirm to agree with terms and conditions as mentioned in the Invitation Letter.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Signature of Supplier

Name: _____

Address: _____

Contact No: _____

23/3/18