



# 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. MME/INS/153/2018-19**

**Date: 27 August 2018**

## **NOTICE INVITING TENDER**

### **Subject: Supply & Installation of Ultrasonic Flaw Detector**

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

S No	Full Description of items/ store	Qty	Delivery
1	<b>Supply &amp; Installation of Ultrasonic Flaw Detector</b> (Detailed Specification is given in Annexure – I)	01 No.	At the Earliest /Ex-Stock

### **Tender Schedule**

Particulars	Date & Time
Bid Security or Earnest Money Deposit	<b>Rs. 8,000.00 (Eight Thousand Only)</b>
Last date and time for submission of tenders	<b>01.10.2018 at 1:00 P.M.</b>
Date and time of opening of tenders	<b>01.10.2018 at 4.00 P.M.</b>

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 Deputy 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) **Educational discount**, if any, should be clearly mentioned.
- 5) You are requested to submit your quotation strictly as per the specifications mentioned in the NIT.
- 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.
- 7) Your tender must be valid for **minimum 90 days** from the date of opening of tender.
- 8) Please mention warranty/ guarantee in your offer clearly. Material/ equipment to be supplied must have minimum warranty/guarantee of **12 months**.
- 9) Each page in the bid document must be numbered properly and duly signed & sealed by the bidder on every page of the bid.
- 10) **The items/ materials shall be required to be delivered at MME Department/ Section through Purchase & Store Section, IIT (ISM) Dhanbad at the risk and cost of the tenderer.**
- 11) Unloading and installation shall be the complete responsibility of the supplier.
- 12) The stores are required to be delivered within 30 days. Late delivery may not be accepted.
- 13) The items offered should be of good quality confirming to BIS standards, wherever applicable.
- 14) Successful bidders will have to submit Performance Security (PBG) in the form of Bank Guarantee as per the Purchase Order before releasing payment.
- 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) 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.
- 17) Please send your sealed offer by Regd. Post/ Speed Post/ Courier along with Courier receipt. Tender/ quotation will be received during IIT (ISM) working hours only (i.e. Monday to Friday). *Late or delayed tenders shall be summarily rejected.*
- 18) Any other information that you may like to obtain, you are free to contact IIT (ISM) before submission of tender.
- 19) 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 of Ultrasonic Flaw Detector

Sl.No.	SPECIFICATION
01	<p><b>User Interface Languages:</b> English</p> <p><b>Transducer Connections:</b> LEMO 00</p> <p><b>Data Storage:</b> 100,000 IDs on-board</p> <p><b>Battery Type and Life:</b> Single lithium-ion rechargeable standard; 6 h life</p> <p><b>Power Requirements:</b> AC Mains: 100 VAC to 120 VAC, 200 VAC to 240 VAC, 50 Hz to 60 Hz</p> <p><b>Display Type:</b> Full VGA (640 × 480 pixels) transfective color LCD, 60 Hz update rate</p> <p><b>Display Dimensions (W × H, Diag.):</b> 117 mm × 89 mm, 146 mm (4.62 in. × 3.49 in., 5.76 in.)</p> <p><b>Overall Dimensions (W × H × D):</b> 209 mm x 128 mm x 36 mm, 58 mm at hand grip (8.2 in. x 5 in. x 1.4 in., 2.3 in. at hand grip)</p> <p><b>Weight:</b> 890 g (1.95 lb), including lithium-ion battery</p>
02	<p><b>USB Ports:</b>(1) USB 1.1 Full Speed Host (Type A); (1) USB 2.0 Full Speed Client (Type Mini B)</p> <p><b>Video Output:</b> 1 digital video output</p>
03	<p><b>IP Rating:</b> Ingress Protection (IP) engineered to IP67 (dust tight and water submersion) and IP65 (dust tight and water jets) per IEC 60529-2004 (Degrees of Protection provided by enclosures—IP Code). The product rating is confirmed by means of Olympus' internal design verification test process.</p> <p><b>Explosive Atmosphere:</b> MIL-STD-810F, Method 511.4, Procedure 1.</p> <p><b>Shock Tested:</b> MIL-STD-810F, Method 516.5, Procedure I, 6 cycles each axis, 15 g, 11 ms half sine.</p> <p><b>Vibration Tested:</b> MIL-STD-810F, Method 514.5, Procedure I, Annex C, Figure 6, general exposure: 1 hour each axis.</p> <p><b>Operating Temperature:</b> -10 °C to 50 °C (14 °F to 122 °F)</p> <p><b>Battery Storage Temperature:</b> 0 °C to 50 °C (32 °F to 122 °F)</p>
04	<p><b>Pulser:</b> Tunable square wave</p> <p><b>PRF:</b> 10 Hz to 2000 Hz in 10 Hz increments</p> <p><b>Energy Settings:</b> 100 V, 200 V, 300 V, or 400 V</p> <p><b>Pulse Width:</b> Adjustable from 25 nsec to 5,000 nsec (0.1 MHz) with PerfectSquare™ technology</p> <p><b>Damping:</b> 50, 400 Ω</p>





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05	<p><b>Maximum Input Signal:</b> 20 Vp  <b>Receiver Input Impedance:</b> 400 <math>\Omega \pm 5\%</math>  <b>Receiver Bandwidth:</b> DC to 26.5 MHz at -3 dB (standard version)  0.2 to 26.5 MHz at -3 dB (EN12668 compliant version)  <b>Digital Filter Settings:</b> 8 digital filter sets (standard version)  7 digital filter sets (EN12668 compliant version)  <b>Rectification:</b> Full-Wave, Positive Half-Wave, Negative Half-Wave, RF  <b>System Linearity:</b> Horizontal- <math>\pm 0.5\%</math> FSW  <b>Resolution:</b> 0.25% FSH, Amplifier Accuracy <math>\pm 1</math> dB  <b>Reject:</b> 0 to 85% FSH in 1% increment positions  <b>Amplitude Measurement:</b> 1.25% to 110% full screen height  <b>Measurement Rate:</b> Equivalent to PRF in all modes (single shot)</p>
06	<p><b>Automated Calibration:</b> Velocity, zero offset  Straight beam (first back wall or echo-to-echo)  Angle beam (sound path or depth)  <b>Test Modes:</b> Pulse Echo, Dual, or Through Transmission  <b>Units:</b> Millimeters, inches, or microseconds  <b>Range:</b> 4.31 mm to 6,700 mm at 5,900 m/s, (0.2320 in./<math>\mu</math>s)  <b>Velocity:</b> 635 m/s to 15240 m/s (0.0250 in./<math>\mu</math>s to 0.6000 in./<math>\mu</math>s)  <b>Zero Offset:</b> 0 to 750 <math>\mu</math>s  <b>Display Delay:</b> -10 microseconds to 2203 microseconds  <b>Refracted Angle:</b> 0° to 85° in 0.1° increments, then jump to 90°</p>
07	<p><b>Measurement Gates:</b> 2 fully independent flaw gates  <b>Gate Start:</b> Variable over entire displayed range  <b>Gate Width:</b> Variable over entire displayed range  <b>Gate Height:</b> Variable from 2 to 95% full screen height in 1% increments  <b>Alarms:</b> Positive and negative threshold/curve, minimum depth (gate 1 and gate 2)</p>
08	<p><b>Measurement Display Locations:</b> 5 locations available (manual or auto selection)  <b>GATE (1, 2):</b> Thickness, sound path, projection, depth, amplitude, time-of-flight, min./max. depth, min./max. amplitude, sizing measurements based on mode.  <b>Four Measurement Display Locations:</b> User selects up to four measurements from either gate to display on the live screen.  <b>Echo-to-echo:</b> Standard gate 2 – gate 1  <b>DAC/TCG:</b> Standard, up to 50 points, 110 dB dynamic TCG range  <b>Special DAC Modes:</b> Custom DAC (up to 6 curves), 20–80% view  <b>Curved Surface Correction:</b> Standard OD or bar correction for angle beam measurements</p>
09	<p><b>Additional Components</b></p> <ol style="list-style-type: none"> <li>Cable</li> <li>V1 and V2 block</li> <li>Angle Probe (2MHz, 45°, 40% typical bandwidth, Nominal element size in mm should be 8×9, Near field in steel 15 mm with connector location at right angle)</li> <li>Protected Face Probe (4MHz, 35% typical bandwidth, Nominal element size 10 mm, Near field 15.6 mm)</li> </ol>



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**Annexure - II**

## **Format for Financial Bid**

NIT No.: MME/INS/153/2018-19

Date: 27 August 2018

Bidders Ref. No.:

Date:

GSTIN:

**Subject: Supply & Installation of Ultrasonic Flaw Detector**

Sl. No.	Full Description of Items (With HSN Code/SAC Code)	Qty.	Rate	Amount
			Packing & Forwarding (if any)	
			<b>Total</b>	
			GST (if any)	
			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
- 4) All the rates must be quoted in Indian Rupees.