



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/PRJ/380/18-19

Date: 8 April 2019

NOTICE INVITING TENDER

Subject: Supply & Installation of Automatic Compression Testing Machine.

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	Supply & Installation of Automatic Compression Testing Machine. (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	Rs. 12,000.00 (Twelve Thousand Only)
Last date and time for submission of tenders	03.05.2019 at 1:00 P.M.
Date and time of opening of tenders	03.05.2019 at 4.00 P.M.

1. You are requested to quote your lowest rates for the supply of above items in the attached format for Financial Bid (Annexure – II - A or B)
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/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) 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.
- 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 **12 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 MME 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 SPECIFICATIONS FOR SUPPLY & INSTALLATION OF AUTOMATIC COMPRESSION TESTING MACHINE

1. **Pumping unit:** 0.5 HP, 1 phase, 220 Volt (or better)
2. **Capacity of the ACTM:** 1000 kN.
3. **Range of Automatic pace rate control:** 1kN/sec to 10KN/sec (or better).
4. **Bonded strain gauge based pressure transducer:** For measuring load induced deflection, bonded strain gauge based pressure transducer (or equivalent set up) must be installed in the machine.
5. **Strain measuring attachments:** There must be attachments (like LVDTs etc.) which are to be fitted with the rock specimens of different sizes for simultaneous measurement of longitudinal and lateral strains.
6. **Provision to get real time Stress ~ Strain Plots:** There must be provision for having real time plots (enlisted below) during the course of experiment through some specified software compatible with the machine. The ACTM must be capable of getting controlled through this software. The desired plots and graphs are:
 - a. Compressive force ~ time plot
 - b. Axial strain ~ time plot
 - c. Compressive Stress ~ Axial strain plot
 - d. Automatic Calculation of Young's modulus of the rock sample
 - e. Lateral strain ~ time plot
 - f. Automatic Calculation of Poisson's ratio
7. **Provisions provided in the ACTM to monitor the Test progress:** Provisions must be provided in order to visualize compressive test progress through the computer monitor. (A high resolution camera synchronized with the software may be installed within the chamber).
8. **Strength of the Test chamber:** The test chamber should be capable of withstanding the burst pressure generated when the rock specimen finally breaks at end of the compressive testing.
9. **Safety Provisions during operating conditions of the machine:** There must be provisions in the machine to avoid rock particles affect the operator during testing process.
10. **Flexure testing facility:** An additional flexure testing facility/fixture compatible with the ACTM model must be provided whose preferable specifications have been mentioned below.
 - **Automatic pace rate control:** 1kN/sec to 10KN/sec (or better). This must be controlled through devoted software installed in the computer (Data Acquisition System).
 - **Fixtures:** Test flexure testing facility/ fixture should be capable of accommodating both 3 point and 4 point loading based flexure testing.
 - **Provision to get real time graphs for test parameter:** There must be facility to obtain the below mentioned real time plots through the computer Data Acquisition System (desktop computer).
 - a. bending load ~ time plot
 - b. flexural stress ~ time plot
 - c. Crack Tip Opening Displacement ~ load.



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- **Specification of flexure fixture:**

- a. Roller diameter- 40mm (or better)
- b. Minimum achievable span length in the lower and upper roller. Upper: 200mm, lower: 400mm (or better)
- c. Maximum and minimum specimen size that can be accommodated on the machine for flexure testing: 100 mmx100 mmx 500mm (or better), 150 mmx150 mmx700 mm (or better).

11. Data Acquisition system and printer:

- A Data Acquisition system(desktop computer preferably windows 10 based) synchronized with the ACTM must be supplied for real time monitoring of test data required for generating the plots related to Stress ~ strain, Elastic modulus, load ~ displacement etc.
- Preferable configuration of the Data Acquisition System: Hard Disk-1 TB (or Better), RAM- 8 GB (or Better), 1 USB port, Additional ports for communicating with machines, mouse and Keyboard.
- A Laser jet/ Inkjet printer synchronized with the Data Acquisition System must be supplied, for plotting of the graphs and plots generated during real time testing.
- Devoted software must be installed on the Data Acquisition System (computer) to accumulate the data from the test, generate plots and automatically calculate elastic properties like: Young's modulus of Elasticity and Poisson's ratio.

12. Other terms and conditions:

- The supplier must have qualified service engineer and customer support staff available in the local office in the metropolitan city nearest to IIT(ISM) Dhanbad.
- The supplier is to impart minimum three days free training to our personal for the operation of the equipment supplied.
- Authority may visit bidder's/Users place to evaluate the quality control, after sales backup facility, expert availability.
- Supplier should have capacity and experience of carrying out AMC with the users of their machine and proof of such documentation will be preferred.
- The vendor must have supplied in earlier instances three working models either at IISc and IITs. The purchase order and performance report of the same is to be produced.
- Vendor is to supply original catalogue with photo and model number of the equipment. Details of the machine supplied by the vendor must be available in the website of the manufacturer.
- Reference standard of the equipment is to be mentioned/highlighted in original catalogue and in technical bid.
- Supplier/manufacturer blacklisted by any govt. organization will not be considered.
- Warranty/ guarantee of the equipment should be 1 year + 4 Year extended onsite.



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Annexure – II (A)

1. PRICE SCHEDULE FOR GOODS BEING OFFERED FROM ABROAD

Name of the Bidder _____ (On bidders letter head)

NIT Reference No. **MME/PRJ/380/18-19**

Date: **8 April 2019**

Bidder's Reference No. _____

Date: _____

Sl. No.	Description/Part No./Make Model	Quantity	Unit Price (in foreign currency)	Total Amount (in foreign currency)
1.				
2.				
3.				
Total Ex-Works Price-				
Packing & Forwarding and inland freight				
*FCA (at port)				
Terminal charges, loading on vassal				
**FOB (name of port)				
Air freight & insurance up to destination port				
*CIF				
Carrier charges & insurance up to final destination				
**CIP				
Concessional Custom Duty (Against DSIR Certificate)				
IGST rate (Against IIT (ISM) Certificate)				
Other Duties/taxes/clearance charge, if any				
Transportation charges up to IIT ISM Dhanbad				
Chargeable weight/Gross weight of consignment				
Indian agency Commission (%)				
Installation & Commissioning charge				
Training charges, if any				
Additional Warranty Charges, if any				
Annual Maintenance Charge, if any				
Educational discounts, if any				

*&** Mandatory requirement

##Total Bid Price _____ in words _____

Note :

Total Bid price in foreign currency _____ in words

- Indian agent name & address _____
- Installation, commissioning & training charges, if any _____
- Please note that Indian agents' commission shall be paid in Indian Rupees only.
- Banker's details such as- Name of account holder, Account Number, Name of Bank, Branch code, RTGS code, NEFT code, SWIFT code etc.
- Price schedule of optional items shall be indicated in a separate sheet in the same performa.
- Quoting Price for FOB/FCA and for CIF/CIP basis, otherwise bid will be rejected.
- Wherever the price quoted on FOB/FCA and CIF/CIP basis are the same, the contract would be made on CIF/CIP basis only.
- Country of Origin, Dimension and Gross Weight must be provided

Signature of Bidder

Name _____

Business Address with contact details _____



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Annexure – II (B)

2.PRICE SCHEDULE FOR GOODS BEING OFFERED WITHIN INDIA

Name of the Bidder _____ (On bidders letter head)

NIT Reference No. **MME/PRJ/380/18-19**

Date: 8 April 2019

Bidder's Reference No. _____

Date:

Sl. No.	Description/Part No./Make Model	Quantity	Unit Price (in foreign currency)	Total Amount (in foreign currency)
1.				
2.				
3.				
Ex-Works Price-				
Packing & Forwarding				
Transportation				
FOR (IIT ISM) Dhanbad				
GST/IGST (their rate(s) as the case may be, clearly specified)				
Please note that IIT ISM is eligible for Concessional GST as per Notification No. 45/2017 – Central Tax (Rate) for CGST, 45/2017 – State Tax (Rate) for SGST and 47/2017 – Central Tax (Rate) for IGST,				
Insurance up to Destination/handover (in case of fabrication)				
Installation & Commissioning charge				
Training charges, if any				
Additional Warranty Charges, if any				
Annual Maintenance Charge, if any				

*(On the basis of the technical specifications submitted)

Total Bid Price _____

in words _____

Note :

(a) The Price schedule of optional items shall be indicated in a separate sheet in the same Performa.

(b) Cost spare parts may be indicated separately

Signature of Bidder

Name _____

Business Address with contact details _____