

# राष्ट्रीय प्रौद्योगिकी संस्थान मिजोरम

## NATIONAL INSTITUTE OF TECHNOLOGY MIZORAM

(An Institution of National Importance under Ministry of Education, Govt. of India) CHALTLANG, AIZAWL, MIZORAM – 796012

Phone/Fax: 0389-2391774/ 0389-2391236 Email: registraroffice@nitmz.ac.in

Date: **03.02.2023** 

No. NITMZ/D-51/2022/3927

## **NOTICE INVITING TENDER (NIT)**

# FOR SUPPLY & INSTALLATION OF EQUIPMENTS IN THE STRUCTURAL LABORATORY OF THE DEPARTMENT OF CIVIL ENGINEERING(CE)

The Registrar, National Institute of Technology Mizoram invites quotation for supply & Installation of Equipments in the Structural Laboratory of Department of Civil Engineering as per details at **ANNEXURE-V** in **Two Bids** to reach the undersigned on or before.

| Sl.<br>No. | Items                                                                                                                                                                                     | Qty | EMD (Rs.)<br>in the form    | Tender<br>Document<br>Fee (Rs.) |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------------------------|---------------------------------|
| 01         | For supply & installation of Computer Controlled<br>Servo Hydraulic Universal Testing Machines<br>(Capacity 2000kN) in the Department of Civil<br>Engineering (CE) at NIT Mizoram, Aizawl | 1   | Rs. 50,000.00               | Rs. 500.00                      |
| 02         | For supply & installation of Automatic Compression<br>Testing Machine 3000 kN Capacity with a touch panel<br>in the Department of Civil Engineering (CE) at<br>NIT Mizoram, Aizawl        | 1   | Payment                     | (Non-<br>refundable)<br>Payment |
| 03         | For supply & installation of Channel Electronic<br>Data Acquisition System in the Department of<br>Civil Engineering (CE) at NIT Mizoram, Aizawl                                          | 1   | through online<br>mode only | through<br>online<br>mode only  |
| 04         | For supply & installation of LVDT in the Department of Civil Engineering (CE) at NIT Mizoram, Aizawl                                                                                      | 3   |                             |                                 |

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Tender Form along with other Terms & Conditions can be downloaded from the Institute's Website www.nitmz.ac.in. However, the Non-refundable Tender Fees of ₹500.00 (Rupees Five Hundred only) and refundable EMD amount of ₹. 50,000.00 (Rupees Fifty Thousand only) by Online Payment and Receipt should be submitted along with the Tender Documents, till 13th February, 2023 at the Payment Details given below before 3:00 P.M.

NATIONAL INSTITUTE OF TECHNOLOGY MIZORAM ACCOUNT No.: 33755447886 STATE BANK OF INDIA BAWNGKAWN BRANCH, AIZAWL, MIZORAM IFSC: SBIN0007059

Sealed Tenders should be dropped in Tender Box No. 02, Kept in the Administrative Office, NIT Mizoram or submitted at <a href="mailto:registraroffice@nitmz.ac.in">registraroffice@nitmz.ac.in</a> till 13th February, 2023 before 3:00 P.M. Tenders received through Registered Post/Speed Post/Courier before the above referred Date and Timing would be considered.

Last Date & Time for Submission : 13-02-2023 (03:00PM)
 Date/Time for Opening of Technical Bids : 13-02-2023 (04:00PM)
 Date of notifying the technically qualified Bidders by Email : 15.02.2023
 Evaluation of Financial bids for technically qualified Bidders : 16.02.2023

VENUE OF BID OPENING: ADMINSITRATIVE BLOCK, NIT MIZORAM, CHALTLANG, AIZAWL

#### **BID INSTRUCTIONS:**

**01.** Quotations will have to be submitted in TWO Bids. The address of the firm submitting the quotation and the Officer to whom the quotation is addressed must appear distinctly on sealed covers. Further, on sealed cover, the following are to be written:

"QUOTATION FOR SUPPLY & INSTALLATION OF EQUIPMENTS IN THE STRUCTURAL LABORATORY OF THE DEPARTMENT OF CIVIL ENGINEERING(CE), NIT MIZORAM" REF. NO NITMZ/D-51/2022/3927 DATE: -03.02.2023

- **O2. Submission of Compliance Certificate:** Duly filled and signed Compliance Certificates (as per formats at **Annexure I (A&B)** are must with the Technical Bid.
- **03. Bid not transferable:** The bid documents are not transferable and the seal and signature of the authorized official of the Firm must appear on all the papers and envelopes submitted.

#### **QUALIFICATION REQUIREMENTS:**

- 1) The Bidder should be an Original Equipment Manufacturer (OEM) or an authorized Dealer/Distributor & a Firm of reputation having sufficient expertise and experience in the subject tender with sound warranty / service support capability and authorization from Manufacturer/Distributor.
- 2) The Bidder should have experience of executing at least One Purchase Order of equipments/Machines/IT Products of value of Rupee Fifty Lacs or Higher within the last 3 Years from any IIT/NITs/Central Government Institutions of North East Region of India.
- 3) The Bidder has to quote for all the items in the above Laboratories, Bidders who do not quote for all the items are subject to be summarily disqualified.
- **4)** The Bidder must have facility for maintenance of Instruments in the North Eastern region for last 1(0ne) year.

#### **NIT TERMS & CONDITIONS:**

1) Rates: Rates quoted in the Price Bid should be on DOOR DELIVERY NIT Mizoram basis,
As per details below:

| Sl. No. | Particulars                                              | Rate |
|---------|----------------------------------------------------------|------|
| 1.      | Basic Price (per unit)                                   |      |
|         | Total                                                    |      |
|         | Taxes (please give break up)                             |      |
|         | Grand Total for the item on door delivery at NIT Mizoram |      |

Bidders shall indicate their rates in clear/visible figures as well as in words and shall not alter/overwrite/make cutting in the quotation. <u>In case of a mismatch, the rates written in words will prevail</u>.

- **2) Validity of Quotation:** Quoted rates must be valid for **90 days** from the date of quotation.
- **3) Warranty:** The quoted equipment and components must be covered with Warrantee for a minimum period of 1(One) year after satisfactory installation.
- **4) Literature a must**: All the quotations must be supported by the printed technical leaflet/ literature and the specifications mentioned in the quotation must be reflected/supported by such printed technical leaflet/literature. The model and specifications quoted should **invariably be highlighted** in the leaflet/literature for easy reference.

- 5) After Sales Service: Vendors should clearly state the available nearest after sales service facilities in the region, without which their offers will summarily be be rejected.
- **6) Dealership Certificate:** Dealers or Agents quoting on behalf of Manufacturer/Distributor must enclose valid Dealership Certificate.

## 7) Earnest Money Deposit (EMD):

- i) Earnest Money of **Rs. 50,000.00 (Rupees Fifty Thousand only)** in the form of **Online Payment (Receipt) only shall be submitted**. EMD in cash or in the form of Cheque, D.D or in any other form will not be accepted.
- ii) The EMD of the tenderer will be refunded **without any interest** within reasonable time after final decision of the tender, normally **within 1 month** from the date of opening of the tender.
- iii) EMD of the successful bidder will be released on submission of the Performance Bank Guarantee (PBG).
- iv) Request for transfer of any previous deposit such as previous EMD or Security Deposit or payment of any pending bill or transfer towards EMD shall not be entertained.

### v) The tenders without EMD will be summarily rejected.

vi) Tenderer shall not be permitted to withdraw his offer or modify the terms and conditions thereof. In case the tenderer fails to observe and comply with the stipulations made herein or backs out after quoting the rates, the aforesaid amount of Earnest Money Deposit will be forfeited.

As per Rule 170 of GFRs 2017, Micro and Small Enterprises (MSEs) and the firms registered with concerned Ministries/Departments are exempted from submission of Bid Security/EMD (if applicable).

- 8) Performance Bank Guarantee (PBG): In case of items with order value of Rupees Five Lakhs only (INR 5,00,000.00) and above, the successful bidder shall furnish an unconditional PBG (as per format at Annexure II) for 3% of the Purchase Order value from a scheduled Bank of India, after receiving the Purchase order. Where the PBG is obtained by a foreign bank, it shall be got confirmed by a Schedule Indian bank and shall be governed by Indian Laws and be subject to the jurisdiction of Hon'ble Gauhati High Court, Aizawl Bench at Aizawl only. The PBG will be kept till the Warranty Period and The PBG shall guarantee that,
- ➤ The Vendor guarantees satisfactory operation of the Equipment & components against poor workmanship, bad quality of materials used, faulty designs and poor performance.
- ➤ The Vendor shall, at his own cost, rectify the defects/replace the items supplied, for defects identified during the period of guarantee.

- ➤ This guarantee shall be operative from the date of installation till 120 days after the warranty period.
- > The proceeds of the performance security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
- > The Performance Security shall be denominated in the currency of the contract.
- > Performance Security may be submitted either by the principal or by the Indian agent

## 9) Delivery:

- > **Time Limit:** Maximum within **30 days/1 month** from the date of issue of the Purchase Order.
- ➤ **Safe Delivery:** All aspects of safe delivery shall be the exclusive responsibility of the Vendor/Supplier. At the destination site, the package will be opened only in the presence of NIT user/representative and vendor's representative. The intact condition of the package and the seal/indicators for not being tempered with shall form the basis for certifying the receipt in good condition.
- ➤ **Insurance:** The supplier is to establish 'All Risk Transit Insurance' coverage till door delivery at NIT Mizoram, Chaltlang, Aizawl, Mizoram 796012.
- **Part Delivery:** Acceptance of part delivery shall be a prerogative of the Institute.
- ➤ **Penalty for delay in Delivery:** The date of delivery should be strictly adhered to otherwise the Registrar, NIT Mizoram reserves the right not to accept delivery in part or full.
- **10) Genuine Pricing**: Vendor is to ensure that quoted price for the particular item is not more than the price quoted to any other customer in India, particularly to IITs/NITs / Centrally Funded Institutions and other Government Organization.
- **11) Conditional tenders not acceptable:** All the terms and conditions mentioned herein must be strictly adhered to by all the vendors. Conditional tenders shall not be accepted on any ground and shall be summarily rejected. Conditions mentioned in the tender bids submitted by vendors will not be binding on NIT Mizoram.
- **12) GST**: GST will be applicable as per GoI rates applicable from time to time. NIT Mizoram possessed customs duty exemption under DSIR, Ministry of Science and Technology, Government of India which is applicable for the purchase of all R&D activities vide No. TU/V/RG-CDE(1254)/2020 dated25-01-2021(Copy at **ANNEXURE-VI**).
- 13) Late and delayed tender: Late and delayed tender will not be considered. In case

- any unscheduled holiday occurs on the prescribed closing/opening date the next working day shall be the prescribed date of closing/opening.
- **14) Payment**: 100% payment within 30 (thirty) days from date of delivery, Satisfactory installation, acceptance and Training.
- the Institute & the Manufacturer/Distributor/Dealer for providing Free Maintenance & Service for 5 Years after expiry of the Warranty Period of the equipment by the Manufacturer/Distributor/Dealer (Preferably from the Manufacturer) within 30 Days from the day of Complain. The cost of the Spare parts required for the service and maintenance will be paid by the Institute along with the To & Fro charges (The cheapest mode of Travel).
- **16) Evaluation of Tender:** Unless specifically mentioned, the overall lowest bid, meeting the technical specifications will be selected for placement of Purchase Order.
- A. Grounds for summary rejection of bid/offer without any further clarification at preliminary evaluation stage:
- 1) Unsigned bid
- 2) Late or delayed bid
- 3) Bid validity is shorter than the required period
- 4) The bid is not accompanied by Earnest Money Deposit (EMD) if EMD is required
- 5) The bidder is not eligible
- 6) No authorization letter from the manufacturer.
- 7) If there is no mention of packing, forwarding, freight, transportation and insurance charge in the offer.
- 8) Not willing to provide performance security if it is requirement of tender
- B. Grounds to be considered as material deviation for summary rejection of bid /offer without any further clarification at the discretion of the NIT Mizoram authority during intensive technical evaluation stage: The good(s) quoted which are not meeting the major/essential technical specifications.
- **17) Enquiry during the course of evaluation not allowed**: No enquiry from the bidder(s) shall be entertained during the course of evaluation of the tender till final decision is conveyed to the successful bidder(s). However, the Purchase Committee or its authorized representative may make enquiries/seek clarification from the bidders. In such a case, the bidder must extend full co-operation. The bidders may also be asked to arrange demonstration of the offered items, in a short period of notice.
- **18)** The acceptance of the quotation will rest solely with the Director, NIT Mizoram, who in the interest of the Institute is not bound to accept the lowest quotation and reserves the right to himself to reject or partially accept any or all the quotations received without assigning any reasons.

## 19) Applicable Law:

- ➤ The contract shall be governed by the laws and procedures established by Govt. of India and subject to exclusive jurisdiction of Gauhati High Court, Aizawl Bench, Aizawl only.
- Any dispute arising out of this purchase shall be referred to the Director NIT Mizoram, and if either of the parties hereto is dissatisfied with the decision, the dispute shall be referred to the decision of an Arbitrator, who should be acceptable to both the parties, to be appointed by the Director, NIT Mizoram. The decision of such Arbitrator shall be final and binding on both the parties.
- **20) Cost of Bidding:** The Bidder shall bear all costs associated with the preparation and submission of its bid, and "the Purchaser", will in no case be responsible or liable for these costs, regardless of the conductor outcome of the bidding process.
- 21) Clarification of bidding documents: A prospective bidder requiring any clarification of the bidding documents shall contact the Purchaser in writing at the Purchaser's address. The Purchaser will respond in writing to any request for clarification, provided that such request is received not later than ten (10) days prior to the dead line for submission of bids. Should the Purchaser deem it necessary to amend the Bidding Documents as a result of a clarification, it shall do so

Enclosure: GENERAL CONDITIONS OF CONTRACT, BID FORM, ANNEXURE - I,
ANNEXURE - II, ANNEXURE - III, ANNEXURE - IV, ANNEXURE - V, ANNEXURE - VI &
ANNEXURE - VII

Sd/(Dr. LALTHANCHAMI SAILO)
REGISTRAR
NATIONAL INSTITUTE OF TECHNOLOGY MIZORAM

### **GENERAL CONDITIONS OF CONTRACT**

### 1) Definitions

In this Contract, the following terms shall be interpreted as indicated: -

The following words and expressions shall have the meanings hereby assigned to them

"Contract" means the Contract Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to there in, including all attachments, appendices, and all documents incorporated by reference therein.

"Contract Documents" means the documents listed in the Contract Agreement, including any amendments thereto.

"Contract Price" means the price payable to the Supplier as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions there from, as may be made pursuant to the Contract.

"Day" means calendar day.

"Completion" means the fulfillment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract. "GCC" means the General Conditions of Contract.

"Goods" means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract.

"Related Services" means the services incidental to the supply of the goods, such as transportation, insurance, installation, training and initial maintenance and other such obligations of the Supplier under the Contract.

"Sub-contractor" means any natural person, private or government entity, or a combination of the above, to whom any part of the Goods to be supplied or execution of any part of the Related Services is sub-contracted by the Supplier.

"Supplier" means the natural person, private or government entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Contract Agreement.

The final destination, where applicable, means the place named in the "National Institute of Technology Mizoram, Aizawl - 796012"

**2) Contract Documents:** Subject to the order of precedence set forth in the Contract Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory. The Contract Agreement shall be read as a whole.

- **Fraud and Corruption:** The purchaser requires that bidders, suppliers, contractors and consultants, if any, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy,
- a) The terms set forth below are defined as follows:
- "Corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution;
- "Fraudulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;
- "Collusive practice" means a scheme or arrangement between two or more bidders, with or without the knowledge of the Borrower, designed to establish bid prices at artificial, non-competitive levels; and
- "Coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract;
- b) The purchaser will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question.
- **4) Joint Venture, Consortium or Association:** If the Supplier is a joint venture, consortium, or association, all of the parties shall be jointly and severally liable to the Purchaser for the fulfillment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the joint venture, consortium, or association. The composition or the constitution of the joint venture, consortium, or association shall not be altered without the prior consent of the Purchaser.
- **Scope of Supply:** The Goods and Related Services to be supplied shall be as specified in the Schedule of requirements.
- **Suppliers' Responsibilities:** The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with Scope of Supply Clause of the GCC, and the Delivery and Completion Schedule, as per GCC Clause relating to delivery and document.
- **Contract price**: Prices charged by the Supplier for the Goods supplied and the Related Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid.
- **Copy Right:** The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein shall remain vested in the Supplier, or, if they are furnished to the Purchaser directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain

vested in such third party.

- **9) Application:** These General Conditions shall apply to the extent that they are not superseded by provisions in other parts of the Contract.
- **10) Standards:** The Goods supplied and services rendered under this Contract shall conform to the standards mentioned in the Technical Specifications and Schedule of Requirements, and, when no applicable standard is mentioned, to the authoritative standard appropriate to the Goods' country of origin and such standards shall be the latest issued by the concerned Institution.

## 11) Patent Indemnity

- (i) The Supplier shall, subject to the Purchaser's compliance with GCC Sub-Clause11.2, indemnify and hold harmless the Purchaser and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of: The installation of the Goods by the Supplier or the use of the Goods in India; and (b) The sale in any country of the products produced by the Goods.
- (ii) If any proceedings are brought or any claim is made against the Purchaser, the Purchaser shall promptly give the Supplier a notice thereof and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claims.

### 12) Inspections and Tests

- (i) The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and Related Services.
- (ii) The Purchaser or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Purchaser. The Technical Specifications shall specify what inspections and tests the Purchaser requires and where they are to be conducted. The Purchaser shall notify the Supplier, in writing, in a timely manner of the identity of any representatives retained for these purposes.
- (iii) Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated

representative to attend the test and/or inspection.

- **(iv)** Should any inspected or tested Goods fail to conform to the specifications, the Purchaser may reject the goods, and the Supplier shall, either replace the rejected Goods or make alterations necessary to meet specification requirements, free of cost, to the Purchaser.
- (v) The Purchaser's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival at final destination shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the Purchaser or its representative prior to the Goods shipment.

## 14) Packing:

- (i) The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.
- (ii) The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be provided for in the Contract and in any subsequent instructions ordered by the Purchaser.
- **Delivery:** Delivery of the Goods and completion and related services shall be made by the Supplier maximum within 30 days or 1 month from the date of issue of the Purchase Order
- **Transportation:** The Supplier is required under the Contract to transport the Goods to a specified destination in NIT Mizoram, Aizawl, Mizoram, defined as the Final Destination, transport to such destination, including insurance, unloading and storage, as specified in the Contract, shall be arranged by the Supplier, and the related costs shall be included in the Contract Price.
- **17) Incidental Services:** The supplier may be required to provide any or all of the services, if any.
- **Spare Parts:** The Supplier shall be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:
- (i) Such spare parts as the Purchaser may elect to purchase from the Supplier, providing that this election shall not relieve the Supplier of any warranty obligations under the Contract; and
- (ii) In the event of termination of production of the spare parts:

- Advance notification to the Purchaser of the pending termination, insufficient time to permit the Purchaser to procure needed requirements; and
- Following such termination, furnishing at no cost to the Purchaser, the blue prints, drawings and specifications of the spare parts, if requested.

## 19) Warranty

- (i) The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.
- (ii) The Supplier further warrants that the Goods shall be free from defects arising from any actor omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in India.
- (iii) The warranty shall remain valid for twelve months (1 Year) after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination.
- **(iv)** The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunities for the Supplier to inspect such defects.
- **(v)** Upon receipt of such notice, the Supplier shall, within a period of 30 days, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.
- **(vi)** If having been notified, the Supplier fails to remedy the defect within the period specified above, the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.

## 20) Change Orders and Contract Amendments.

- (i) The Purchaser may at any time, by written order given to the Supplier pursuant to Clause on Notices of the GCC make changes within the general scope of the Contract in any one or more of the following:
  - Drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
  - The place of delivery; and/or
  - The Services to be provided by the Supplier.
  - The delivery schedule.
- (ii) If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for

- adjustment under this clause must be asserted within fifteen (15) days from the date of the Supplier's receipt of the Purchaser's change order.
- (iii) No variation or modification in the terms of the contract shall be made except by a written amendment signed by both parties.
- **21) Assignment:** The Supplier shall not assign, in whole or in part, its obligations to perform under the Contract, except with the Purchaser's prior written consent.
- **Subcontracts:** The Supplier shall notify the Purchaser in writing of all subcontracts awarded under this Contract if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the Supplier from any liability or duties or obligation under the Contract.

## 23) Extension of Time:

- (i) Delivery of the Goods and performance of the Services shall be made by the Supplier in accordance with the time schedule specified by the Purchaser.
- (ii) If at any time during performance of the Contract, the Supplier or its sub-contractor(s) should encounter conditions impeding timely delivery of the Goods and performance of Services, the Supplier shall promptly notify the Purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may, at its discretion, extend the Supplier's time for performance with or without penalty, in which case the extension shall be ratified by the parties by amendment of the Contract.
- (iii) Except as provided under the Force Majeure clause of the GCC, a delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of penalty pursuant to Penalty Clause of the GCC unless an extension of time is agreed upon pursuant to above clause without the application of penalty clause.
- **Penalty Clause:** Subject to GCC Clause on Force Majeure, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, reserves the right not to accept delivery in part or full.

### 25) Termination for Default:

- (i) The Purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Supplier, terminate the Contract in whole or part:
- If the Supplier fails to deliver any or all of the Goods within the period(s) specified in the contract, or within any extension thereof granted by the Purchaser

- pursuant to GCC Clause on Extension of Time; or
- If the Supplier fails to perform any other obligation(s) under the Contract.
- If the Supplier, in the judgment of the Purchaser has engaged in corrupt or fraudulent or collusive or coercive practices as defined in GCC Clause on Fraud or Corruption in competing for or in executing the Contract.
- (ii) In the event the purchaser terminates the contract in whole or in part, he may take recourse to any one or more of the following action:
  - a) The Performance Security is to be forfeited;
  - b) The purchaser may procure, upon such terms and in such manner as it deems appropriate, stores similar to those undelivered, and the supplier shall be liable for all available actions against it in terms of the contract.
  - c) However, the supplier shall continue to perform the contract to the extent not terminated.

### 26) Force Majeure

- (i) Notwithstanding the provisions of GCC Clauses relating to extension of time, penalty and Termination for Default the Supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, its delay in performance or other failure to perform its obligations under the Contract is the result of an event of *Force Majeure*.
- (ii) For purposes of this Clause, "Force Majeure" means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
- (iii) If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof within 21 days of its occurrence. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
- **(iv)** If the performance in whole or in part or any obligations under the contract is prevented or delayed by any reason of force majeure for a period exceeding 60 days, either party may at its option terminate the contract without any financial repercussions on either side.

**Termination for Insolvency:** The Purchaser may at any time terminate the Contract by giving written notice to the Supplier, if the Supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy, which has accrued or will accrue thereafter to the Purchaser.

## 28) Settlement of Disputes:

- (i) The Purchaser and the supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.
- (ii) If, after twenty-one (21) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, as here in after provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract.
- (iii) The dispute settlement mechanism / arbitration proceedings shall be concluded as under: In case of Dispute or difference arising between the Purchaser and a domestic supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Indian Arbitration & Conciliation Act, 1996, the rules there under and any statutory modifications or re-enactments thereof shall apply to the arbitration proceedings. The dispute shall be referred to the Director, NIT Mizoram, Aizawl and if he is unable or unwilling to act, to the sole arbitration of some other person appointed by him willing to act as such Arbitrator. The award of the arbitrator so appointed shall be final, conclusive and binding on all parties to this order.

In the case of a dispute between the purchaser and a Foreign Supplier, the dispute shall be settled by arbitration, in accordance with provision of sub clause (a) above. But if this is not acceptable to the supplier then the dispute shall be settled in accordance with provisions of UNCITRAL (United Nations Commission on International Trade Law) Arbitration Rules.

- (iv) The venue of the arbitration shall be the place from where the order is issued.
- (v) Notwithstanding any reference to arbitration herein, the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and the Purchaser shall pay the Supplier any monies due the Supplier.
- **Governing Language:** The contract shall be written in English language, which shall

govern its interpretation. All correspondence and other documents pertaining to the Contract, which are exchanged by the parties, shall be written in English language only.

**Applicable Law:** The Contract shall be interpreted in accordance with the laws of the Union of India and all disputes shall be subject to place of jurisdiction of Aizawl, Mizoram, India.

### 31) Notices:

- (i) Any notice given by one party to the other pursuant to this contract/order shall be sent to the other party in writing or by cable, telex, FAX or e-mail and confirmed in writing to the other party's address.
- (ii) A notice shall be effective when delivered or on the notice's effective date, whichever is later.

### 32) Taxes and Duties

- (i) For goods manufactured outside India, the Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed inside and outside India.
- (ii) For goods Manufactured within India, the Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred till its final manufacture/production.
- (iii) If any tax exemptions, reductions, allowances or privileges may be available to the Supplier in India, the Purchaser shall its best efforts to enable the Supplier to benefit from any such tax savings to the maximum allowable extent.
- **Right to use Defective Goods:** If after delivery, acceptance and installation and within the guarantee and warranty period, the operation or use of the goods proves to be unsatisfactory, the Purchaser shall have the right to continue to operate or use such goods until rectifications of defects, errors or omissions by repair or by partial or complete replacement is made without interfering with the Purchaser's operation.
- **Protection against Damage:** The system shall not be prone to damage during power failures and trip outs.
- **Site Preparation and Installation:** The Purchaser is solely responsible for the 35) construction of the equipment sites in Compliance with the technical and environmental specifications defined by the Supplier. The Purchaser will designate the installation sites before the scheduled installation date to allow the Supplier to perform a site inspection to verify the appropriateness of the sites before the installation of the Equipment, if required. The supplier shall inform the purchaser about the site preparation, if any, needed for installation, of the the purchaser's immediately after notification of goods at site award.

### **BIDFORM**

Dated:

Tender No: NITMZ/D-51/2022/3927 Date:03.02.2023

To,

The Registrar NIT Mizoram Chaltlang, Aizawl, Mizoram - 796012

#### Madam,

- Having read the terms and conditions of the above-mentioned tender and equipments to be provided, I / we, the undersigned, offer to provide the equipments (mentioned in **Annexure** V) in conformity with the conditions of contract and specifications for the sum shown in the schedule of prices attached herewith in separate sealed cover and made part of this Bid.
- 2. If our Bid is accepted, we will obtain the Performance Bank Guarantees from a Scheduled Bank, for a sum, as mentioned in this tender document for due performance of the Contract.
- 3. We agree to abide by this Bid for a period of 90 days from the date fixed for Bid opening and it shall remain binding upon us and may be accepted at any time before the expiry of that period.
- 4. Bid submitted by us are properly sealed and prepared so as to prevent any subsequent alteration and/or replacement.
- 5. We understand that you are not bound to accept the lowest or any bid, you may receive.
- 6. NIT Mizoram reserves the right to cancel the tender without assigning any reason thereof.
- 7. NIT Mizoram reserves the right to reject any or all tenders without assigning any reasons thereof.

Signature Full Name Name of Firm/Company/Agency Seal

## **ANNEXURE - I**

## A. <u>COMPLIANCE CERTIFICATE FOR NIT TERMS</u>

(To be enclosed in the Technical Bid)

| Sl. No. | NIT Mizoram Terms and Conditions                                                     | Yes / No |
|---------|--------------------------------------------------------------------------------------|----------|
| 01      | Rate quoted as per instruction                                                       |          |
| 02      | AMC rate after warranty provided                                                     |          |
| 03      | Validity of quoted rate for 90 days agreed                                           |          |
| 04      | <b>EMD</b> submitted (appropriate certificate enclosed)                              |          |
| 05      | PBG term agreed                                                                      |          |
| 06      | Payment term agreed                                                                  |          |
| 07      | <b>Delivery terms</b> agreed                                                         |          |
| 80      | Warranty period agreed                                                               |          |
| 09      | <b>Literature:</b> Printed Literature provided                                       |          |
| 10      | <b>Dealership</b> / distributorship certificate (in case of dealers/agents) provided |          |
| 11      | <b>Sales Service</b> : address of after Sales Service Centre in India (for imported  |          |
|         | goods)/ in the region provided                                                       |          |
| 12      | Applicable Law terms agreed                                                          |          |

| Signature with Seal: |
|----------------------|
| Vendor: M/s          |

## B. <u>COMPLIANCE CERTIFICATE FOR SPECIFICATIONS</u> (One for each item must be enclosed in the Technical Bid)

| Item Sl. No.:        |                   |  |  |  |  |
|----------------------|-------------------|--|--|--|--|
| Quoted Item Specs. * | Complied (Yes/No) |  |  |  |  |
|                      |                   |  |  |  |  |
|                      |                   |  |  |  |  |
|                      |                   |  |  |  |  |
|                      |                   |  |  |  |  |

| Signature with Seal |
|---------------------|
| Vendor: M/s         |

<sup>\*</sup> Vendor must quote the parameter specification of the quoted product in this column and not just copy the specification from the tender call document. Failure to do so will lead to rejection of the tender.

## ANNEXURE-II

## **PERFORMANCE BANK GUARANTEE**

| To:                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The Registrar National Institute of Technology Mizoram Aizawl - 796012, Mizoram                                                                                                                                                                                                      |
| WHEREAS                                                                                                                                                                                                                                                                              |
| <b>AND WHEREAS</b> it has been stipulated by you in the said order that the Supplier shall furnish you with a Bank Guarantee by a recognized Bank for the sum specified therein as security for compliance with the Supplier's performance obligations in accordance with the Order. |
| AND WHEREAS we have agreed to give the Supplier a Guarantee:  THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Supplier, up to a total of                                                                                                  |
| This guarantee is valid until the day of20                                                                                                                                                                                                                                           |
| Signature and Seal of Guarantors                                                                                                                                                                                                                                                     |
| Date                                                                                                                                                                                                                                                                                 |
| All correspondence with reference to this guarantee shall be made at the following address:                                                                                                                                                                                          |
| National Institute of Technology Mizoram                                                                                                                                                                                                                                             |

## **ANNEXURE-III**

## MANUFACTURERS' / DISTRIBUTOR'S AUTHORIZATION FORM

| Го,                                                |                                  |         |    | Dated      |             |         |                                |
|----------------------------------------------------|----------------------------------|---------|----|------------|-------------|---------|--------------------------------|
| The Registrar<br>National Instit<br>Aizawl, Mizora | ute of Technology<br>nm - 796012 | Mizoram | 1  |            |             |         |                                |
| Dear Madam,                                        |                                  |         |    |            |             |         |                                |
| WeManufacturers / Dist<br>having Factories /off    | ributors of                      |         |    |            |             |         |                                |
|                                                    |                                  |         |    | (address o | of factory, | office) |                                |
| Dealer) is our enquiry no                          | authorized                       | dealer  | to | quote      | (Name o     | f the   | tender                         |
|                                                    | (Na                              | ame)    |    | (Name o    | of Manufac  |         | rs faithfully,<br>Distributor) |

# ANNEXURE-IV CONTRACT FORM

| Contract No.               |           |         |             |         |        |          |        |
|----------------------------|-----------|---------|-------------|---------|--------|----------|--------|
| THIS CONTRACT AGREEMENT is | s made on | Date: T | he [insert: | number] | day of | [insert: | month] |
| [insert: year] BETWEEN     |           |         |             |         |        |          |        |

- (1) National Institute of Technology, Mizoram, Chaltlang, Aizawl represented by \_\_\_\_\_ [insert complete name and address] of Purchaser (hereinafter called "the Purchaser"), and
- [insert name of Supplier], a corporation incorporated under the laws of [country of Supplier] and having its principal place of business at [insert: address of Supplier] (hereinafter called "the Supplier")

WHEREAS the Purchaser invited bids for certain Goods and ancillary services, viz., [insert brief description of Goods and Services] and has accepted a Bid by the Supplier for the supply of those Goods and Services in the sum of [insert Contract Price in words and figures, expressed in the Contract currency] (hereinafter called "the Contract Price").

### NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

- 1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
- **2.** The following documents shall constitute the Contract between the Purchaser and the Supplier, and each shall be read and construed as an integral part of the Contract:
  - a) This Contract Agreement
  - **b)** General Conditions of Contract
  - c) Technical Requirements (including Schedule of Requirements and Technical Specifications)
  - d) The Supplier's Bid and original Price Schedules
  - e) The Purchaser's Notification of Award
  - **f)** [Add here any other document(s)]
- 3. This Contract shall prevail overall other Contract documents. In the event of any discrepancy or inconsistency within the Contract documents, then the documents shall prevail in the order listed above.
- 4. In consideration of the payments to be made by the Purchaser to the Supplier as herein after mentioned, the Supplier hereby covenants with the Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
- 5. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the

manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of Union of India on the day, month and year indicated above.

## For and on behalf of the National Institute of Technology, Mizoram

Signed: [insert signature] in the capacity of [insert title or other appropriate designation] in the presence of [insert identification of official witness]

Signed: [insert signature]

in the capacity of [insert title or other appropriate designation]

in the presence of [insert identification of official witness]

## For and on behalf of the Supplier

Signed: [insert signature of authorized representative(s) of the Supplier] in the capacity of [insert title or other appropriate designation]

in the presence of [insert identification of official witness]

## ANNEXURE - V

## **LIST OF EQUIPMENTS & SPECIFICATION FOR STRUCTURAL LABORATORY**

| Sl.    | Name of Equipment                                                                | Technical Specification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Quantity |
|--------|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| No. 1. | Computer Controlled Servo Hydraulic Universal Testing Machines (Capacity 2000kN) | The machine is based on Servo Hydraulic Closed Loop principle and fully computer controlled, operated through Windows based software with ease of operation. HLC-591 (FL) machines are automatic pace setting based on servo hydraulic closed loop principle. In these series of machines, the pace setting is achieved through a combination of advanced electronic and hydraulic system. Pacing speed is programmed through the software/ touch panel in selectable control modes and controlled by servo/proportional valve through PID controller.  Salient Features  Based on SERVO HYDRAULIC CLOSED LOOP FEEDBACK mechanism.  Comply with various International and National standards.  Six pillar type Loading frame to have better stability.  Easy cross head movement on the two pillars to adjust the gap with easy operation for specimen setting as per requirement.  Easily changeable Hydraulically operated Front-Loading Grips for Tension test.  Fully Computer Controlled operation with User friendly Software.  Controlling on both Load (kN/sec)/stress (N/mm/sec), Displacement (mm/sec)or Strain Control basis.  Facility to study Post failure behaviors of specimens.  Inching/Release operation to set Sample.  Auto-releasee facility after specimen failure.  8 or 12 Additional input channels for external transducers.  Load Measuring Accuracy less than +0.5% of the measured value of Load in the Range from 2% -100% capacity.  Displacement Measuring Accuracy less than +0.5% of the measured value of =displacement.  High-speed Data acquisition and Statistical Analysis software.  Online display of test data with real time plotting of Load v/s Time, Displacement graphs.  Statistical analysis of the test results along with facility to export data to Excel.  Safety features like over travel limit for central cross head, over travel limit for ram and over loading of the system and overheating of oil is provided as standard in the machine. | 1        |
|        |                                                                                  | Tensile/ Compression/ Bend/ Flexure/Shear/Hardness test on                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |          |

different ferrous and non-ferrous materials conforming to testing procedure laid down in IS/ASTM standards

#### (A) LOAD FRAME

The Loading Frame consists of a central cross head whose position is adjustable through motor-driven lead screw movement depending on the size of the test specimen. The lower table is carried by the piston of the Hydraulic Ram of suitable capacity positioned in the cast iron base of the machine. The upper cross head is carried by four steel columns fixed to the lower table. The machine have six pillars in total for stability and rigidly. Compression, transverse, bending, shear and hardness tests are carried out between the central cross head and lower table while the tension test is carried between the central and upper cross heads. Sensing of load is through a strain gauge based transducers, while the movement of the lower table (ram Stroke) is measured by rotary encoder/displacement transducers Safety features like over travel limit for central cross head, over travel limit for ram and over loading of the system are provided as standard with the machines.

#### (B) HYDRAULIC PUMPING SYSTEM

Hydraulic Pumping system is based on Servo Hydraulic principle with servo/proportional valve to control motion of the cylinder/actuator. It is suitable for the supply of required flow and pressure for the movement of the actuator. It has an oil tank of adequate capacity, vane type pump powered by a three-phase motor. All the electrical controls including the temperature controller are fixed on one side of the tank. It includes all the accessories like pressure line filter, return line filter, oil level, relief valve, pressure gauge and air/water cooled heat exchanger. Anti-vibration mountings shall be provided as standard along with the HPS. Power Supply- 440V, three phase.

# C. PC BASED CONTROL MECHANISM AND MEASUREMENT SYSTEM

Control system provides digital servo control, Ramp generation for machine movement, Data Acquisition etc. for continuous operation.

Operating Control Modes - Load Control (Stress Control), Displacement Control (Stroke Control) Testing Speeds

- Programmable in all control modes
- Load, Displacement & Extensometer Measurements
  - Load Measurement through Electronic load measuring device Load Accuracy: < + 0.5% of the measured load from 2% to 100% of capacity of machine
  - Displacement Measurement through displacement transducer/LVDT Displacement Resolution: 0.01mm Displacement Accuracy: < 0.5% of measured value of displacement
  - Extension Measurement through variable gauge length extensometer
     Gauge Length: 50mm, 100mm & 200mm

Extension Resolution: 0.001mm

Extension Accuracy: < 0.5% of measured value of extension

# PC system and Application Software for Controlling and Analysis

System shall be supplied with dedicated computer of following configuration or better for operation of the machine and analysis of test results. Computer Intel i5 Processor, 320 GB HDD, 2GB RAM, DVD R/W drive, Key Board, Optical Mouse, 6USB Ports, 19" TFT Screen, Deskjet Colored Printer, UPS

#### **Application Software**

Application software should the integral part of the system for precise controlling, operation & Data Acquisition, storage, processing, analysis and reporting.

#### **Salient Features**

- Windows-based user-friendly software with an easy user interface.
- Programmable rate of loading (Pace Rate) and other sample parameters.
- Independent Taring or Pre-setting of Load- Facility for auto-zeroing of deflection at pre-set load.
- Facility to Test parameter setting and creation of test methods/profiles up to 30.
- Auto release of system facility after sample failure and facility to see the post failure behaviour of the specimen.
- Programmable Limits for Load, displacement & Strain.
- Facility to hold machine load and restart loading or unloading for number of steps.
- Online display of numerical values of Load, Displacement and Extensometer.
- Real-time plotting of Load v/s Time, Displacement v/s time, Extensometer v/s Time and Load v/s Displacement graphs.
- Automatic scaling of graphs in real-time.
- Facility to save and retrieve test data along with order information about the specimen such as age, specimen no., size, dimensions etc. in user defined file/directory.

#### **Analysis Software**

Analysis software provides flexibility to user to do statistical analysis of test results and report generation as per relevant standards such as IS, ASTM etc.

#### Salient features

- Plotting of following graphs-Load v/s Time, Displacement v/s Time, Load v/s Displacement, Stress v/s Strain, Load v/s Extensometer, Extensometer v/s Time
- Calculation of various parameters such as load and elongation at yields, peak load and displacement at break, yield stress, Modulus of Elasticity, Ultimate tensile strength, Proof stress, compressive strength etc.
- Multi graph and zooming options for comparison
- Facility to print the data and all the graphs

- Advanced Statistical analysis (such as mean, SD, Variance etc.) for processing of test results
- Batch Summary Report with multi graph facility for comparison up to 30 specimen
- Facility to export data to Excel or PDF

#### **Broad Technical Specifications are given below:**

Max. Capacity (kN): 2000

1st Measuring range (kN): 0-200

Least Count (N): 100

2nd Measuring range (kN): 200-2000

Least Count (N): 1000

Clearance for Tension test (mm): 50-900 Clearance for compression test (mm): 0-900

Ram Stroke (mm): 250

Piston speed at no load (mm/min): 0-40 Clearance between columns (mm): 750

Connected Load (K.W.): 4.5

Voltage: 400-440

Phase: 3

Standard Accessories supplied with the machine

For Tension

Clamping jaws for round specimens(mm): 10-25

25-40

Clamping jaws for flat specimens (mm): 0-20

20-40

Width (mm) of specimen: 75

# Hydraulically Operated front-loading grips will be supplied with the machine

For Compression

Diameter of platens (mm): 250

For Transverse

Diameter of rollers (mm): 50 Length of Rollers (mm): 170 Max. span between the rollers (adjustable) (mm): 1000

#### **Optional Accessories at Extra Cost**

#### 1) Electronic Extensometer

It is a variable gauge length type extensometer suitable to determine proof stress and can be used to measure extension on both round and flat specimens. This extensometer conforms to ISO 9513 standard.

Gauge length: 50 mm, 100 mm and 200 mm

Measuring range: 4 mm Resolution: 0.001 mm

#### 2) Bend - Rebend Test Attachment

Bend Testing fixture is suitable to carry out bend and rebend tests on structure steel having sizes upto 50 mm dia and high-strength deformed steel bars and wires upto 40 mm dia.

#### 3) Wire Rope Test Attachment

Suitable to carry out tensile test on wire ropes upto 10 mm

| ii) Eight sets of threaded bushes for testing threaded specimens from 4 mm to 20 mm  Automatic Compression Testing Machine 3000 kN Capacity with touch panel.  Automatic Compression Testing Machine is capable of conducting compression tests on concrete specimens (Cubes and Cylinders) and allied products as per IS: 516/IS: 4031 Part 6: 1988/ASTM C 39 and conforms to requirement of IS: 14858-2000. These compression Testing Machine are state of the art machines based on the principle of CLOSE LOOP. The system can be loaded in load/stress control basis. The system accuracy is better than +/-1% of indicated value of load. A special type of 4 piece oil filled spherical seating is provided conforming to IS: 14858-2000. The system has an arrangement for automatic pacing system based on closed loop feed back principle, which is achieved by the combination of advance hydraulic and electronic system. Control signal from the electronic system is passed on to the control drive of the motor through the P.I.D. Controller which in turns control the flow to the hydraulic ram thereby keeping the pace rate within +/- 2% of the pre programmed value.  Salient Features:  Conforming to Testing Procedures laid down in IS: 516/IS: 4031: Part 6: 1988/ASTM C39 for concrete specimen.  Machine conforming to IS: 14858.  Microprocessor based touch panel graphic display to control the machine operation and display of data.  Programmable rate of loading (Pace rate) and other |    |                                                               | 4) Shear Test Attachment Shear testing attachment for round metallic specimen with complete set of dies for testing specimen of diameter 5,6,10,12,16 & 20 mm. 5) Flexure Test Attachment 6) Brinell Hardness Test Attachment Attachment suitable to carry out birnell hardness test complete with ball indenters 5 mm and 10 mm and microscope. 7) Bolt Test Attachment Attachment to accommodate buses to test threaded and collar type specimens i) Eight set of plain bushes for testing collar type specimens from 4 mm to 20 mm.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <ul> <li>sample parameters.</li> <li>Real-time display of load and peak load value with pace rate deviation bars.</li> <li>Inching/fast lift operation to adjust gap between sample and upper platen.</li> <li>Automatic release facility after sample failure</li> <li>Automatic strength calculation and display</li> <li>Peak stress calculation based on sample type, shape and dimensions</li> <li>Storing of results in user defined file with sample parameter and other details</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2. | Compression Testing<br>Machine 3000 kN<br>Capacity with touch | Automatic Compression Testing Machine is capable of conducting compression tests on concrete specimens (Cubes and Cylinders) and allied products as per IS: 516/IS: 4031 Part 6: 1988/ASTM C 39 and conforms to requirement of IS: 14858-2000. These compression Testing Machine are state of the art machines based on the principle of CLOSE LOOP. The system can be loaded in load/stress control basis. The system accuracy is better than +/-1% of indicated value of load. A special type of 4 piece oil filled spherical seating is provided conforming to IS: 14858-2000. The system has an arrangement for automatic pacing system based on closed loop feed back principle, which is achieved by the combination of advance hydraulic and electronic system. Control signal from the electronic system is passed on to the control drive of the motor through the P.I.D. Controller which in turns control the flow to the hydraulic ram thereby keeping the pace rate within +/- 2% of the pre programmed value.  Salient Features: -  • Conforming to Testing Procedures laid down in IS: 516/IS: 4031: Part 6: 1988/ASTM C39 for concrete specimen.  • Machine conforming to IS: 14858.  • Microprocessor based touch panel graphic display to control the machine operation and display of data.  • Programmable rate of loading (Pace rate) and other sample parameters.  • Real-time display of load and peak load value with pace rate deviation bars.  • Inching/fast lift operation to adjust gap between sample and upper platen.  • Automatic release facility after sample failure  • Automatic strength calculation and display  • Peak stress calculation based on sample type, shape and dimensions  • Storing of results in user defined file with sample |  |

Safety limits for Over Load and Over Displacement ranges.

The complete system consists of Load Frame, Hydraulic Pumping Unit,

Microprocessor based touch panel display and control system & various height spacers to accommodate different size specimen.

#### 1) Load Frame

Load frame is steel welded fabricated structure. It is designed to withstand a few million times of full cycles of loading without any sign of distortion or fatigue. These frames are light in weight. The base carries a fine finished hydraulic ram and the lower platen. The top plate has the oil filled spherical seating to take care of any irregularity of the specimen surface or slight misplacement of the specimen from the central position. Front cover is provided as a protection to the operator while at the same time giving an unobstructive view of the specimen under test. Proximity switch/limit switch is provided as safe guard against over travel.

### **Technical specifications**

Capacity of the frame: 3000 kN

Vertical clearance (Clearance between platens): 340 mm Horizontal clearance (Distance between side plates): 400 mm

Travel of the Ram : 50 mm Platen size : 300 mm diameter

#### 2) Hydraulic Pumping System

Hydraulic pumping system, housed in an elegant console for low noise, consists of multi plunger pump driven by a suitable servo motor operated on 220 V, Single Phase, 50 Hz. This pump gives a continuous non-pulsating oil flow to the ram of the loading frame. Pressure switch is provided for additional safety against over load. Release valve is also placed at a convenient location to release the load manually after sample failure.

# 3) Microprocessor based Touch panel display & Control system

Control system provides the digital servo control, Ramp generation for the machine, data acquisition etc. for the continuous operation of the system

#### **Specification of Controlled Unit**

- Automatic pace rate control as programmed in the controller
- Control Channel Load/Stress
- Load ranges 0-3000 kN
- Supply input: 220-240 VAC, 50 Hz.

#### **Salient features of System**

- Menu Driven Interface
- Facility to perform various operations such as TARE, PROGRAMMING, START, STOP Etc. from touch panel display
- Programmable rate of loading (Pace rate) and sample parameters (Shape, Dimension etc.) through touch panel

| 4 | LVDT                                       | (Computer & Sensors are not part of the supply.)  LVDT Range +/- 50 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 3 |
|---|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
|   |                                            | <ul> <li>Broadly the following facilities are incorporated in the system: -</li> <li>32 channels (8 Load Cell Channels, 8 Pressure sensor channel, 8 LVDT Channel and 8 Strain Gauge Channels).</li> <li>Fully programmable with keys panel to perform various operations such as TARE, PROGRAMMING, START, STOP etc.</li> <li>Non-volatile memory and battery backed clock.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |
| 3 | Channel Electronic Data Acquisition System | The thirty-two channel microprocessor-based data acquisition system is suitable for acquiring data from 32 independent sensors in the range of +/5VDC FSO (8 Load Cell Channels, 8 Pressure sensor channels, 8 LVDT Channels and 8 Strain Gauge Channels). All these channels are being measured directly in their respective engineering units. The data of all channels can be transferred to computer through RS-232/USB and can be online monitored in the software.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1 |
|   |                                            | <ul> <li>Standalone system to operate the machine (Start, stop and hold) without computer</li> <li>Microprocessor-based touch panel graphic display to control the machine operation and display of data</li> <li>Fully automated operation to start, stop and hold loading with automatic pace rate control from 1-10 kN/sec.</li> <li>Automatic strength calculation and display</li> <li>Automatic pace rate control at preset value with pace deviation bar.</li> <li>On-Line display of Load and Peak load with recording of peak load along other sample details</li> <li>Peak stress calculation based on sample type, shape and dimensions</li> <li>Configurable Engineering Units for machine selection</li> <li>Storing of results in user defined file with sample parameter and other details</li> <li>Real-time clock check to keep automatic track of the date, time and runs</li> <li>Test results can be stored in the electronic unit with unique record no. and can be retrieved and transferred to USB drive for printing</li> <li>Transmission of Data to computer through Ethernet/USB/RS232 Port. (Computer is not part of the supply.)</li> </ul> |   |

#### **ANNEXURE-VI**

दूरभाष/TEL : 26962819, 26567373 (EPABX) : 26565694, 26562133

EPABX) 26565687, 26562144 26562134, 26562122

: 26960629, 26529745 : http://www.dsir.gov.in



भारत सरकार विज्ञान और प्रौद्योगिकी मंत्रालय वैज्ञानिक और औद्योगिक अनुसंधान विभाग टेक्नोलॉजी भवन, नया महरौली मार्ग, नई दिल्ली - 110016

GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
Department of Scientific and Industrial Research
Technology Bhavan, New Mehrauli Road,
New Delhi - 110016

Dated: 25-01-2021



To,

सचना का

अधिकार

**RIGHT TO** 

INFORMATION Website

The Registrar
National Institute of Technology – Mizoram
Chaltlang
Aizawl – 796 012
Mizoram

Subject: Renewal of Registration of Public Funded Research Institutions or a University or an Indian Institute of Technology or Indian Institute of Science, Bangalore or a Regional Engg. College, other than a Hospital\*, for purposes of availing Customs Duty exemption in terms of Notfn. No. 51/96-Customs dt. 23.07.1996, Notfn. No. 47/2017-Integrated Tax (Rate) dt. 14.11.2017 and Notfn. No. 45/2017- Central Tax (Rate) dt. 14.11.2017, Notfn. No. 45/2017-Union Territory Tax (Rate) dt. 14.11.2017, as amended from time to time.

With Reference: Your letter dated 09-12-2020 on the above subject, this is the certificate of registration.

#### CERTIFICATE OF REGISTRATION

This is to certify that National Institute of Technology – Mizoram, other than Hospital\*, is registered with the Department of Scientific and Industrial Research (DSIR) for purposes of availing Customs Duty exemptions in terms of Notfn. No. 51/96- Customs dt. 23.07.1996, Notfn. No. 28/2003- Customs dt. 01.03.2003, Notfn. No. 43/2017- Customs dt. 30.06.2017 & Notfn. No. 47/2017- Integrated Tax (Rate) dt. 14.11.2017, Notfn. No. 10/2018-Integrated Tax (Rate) dt. 25.01.2018 and Notfn. No. 45/2017- Central Tax (Rate) dt. 14.11.2017, Notfn. No. 45/2017- Union Territory Tax (Rate) dt. 14.11.2017 & Notfn. No. 9/2018- Central Tax (Rate) dt. 25.01.2018, Notfn. No. 9/2018- Union Territory Tax (Rate) dt. 25.01.2018, as amended from time to time for research purposes only. This Registration is subject to terms and conditions mentioned overleaf.

This Registration is valid up to 31.08.2025.

Please acknowledge the receipt.

Yours faithfully,

(Dr. P.K.Dutta Scientist - 'F'

\* Certificate of registration is not valid for activities falling within the definition of "hospital" as per notification no. 51/96 — Customs dated 23-07-1996 issued by the Department of Revenue. The institutions are cautioned to go through the notification before availing duty exemptions under this notification

Terms and conditions for registration of public funded research institutions, etc., other than a hospital for the purposes of availing Customs Duty exemption in terms of Notfn. No. 51/96-Customs dt. 23.07.1996, Notfn. No. 47/2017-Integrated Tax (Rate) dt. 14.11.2017 and Notfn. No. 45/2017- Central Tax (Rate) dt. 14.11.2017, Notfn. No. 45/2017- Union Territory Tax (Rate) dt. 14.11.2017, as amended from time to time.

- 01. The institution should acknowledge receipt of the registration letter by stating that they will abide by the terms and conditions of registration.
- 02. The registration would be valid for the period specified in the registration letter\*\*. Request for renewal of registration shall be made in the prescribed proforma, at least 3 months before the expiry of the valid registration. Applications received late may not be considered.
  - \*\* However, certificate of registration is not valid for activities falling within the definition of 'hospital' as per notification no. 51/96-Customs dated 23.07.1996 issued by the Department of Revenue. The institutions are cautioned to go through the notification before availing duty exemptions under this notification.
- 03. Brief summary of the R&D activities, status of on-going projects and achievements of the institution shall be submitted to the DSIR at the end of 5(five) years, in case of institution where validity of registration is 10(ten) years. This should include details related to papers published, patents obtained and processes developed, new products introduced, awards & prizes received and copy of the latest Annual Report.
- 04. The institution should have a broad based research advisory committee (RAC), which should meet at regular intervals for approving, guiding and monitoring the ongoing and future research projects.
- 05. The institution should have separate budget for research. The institution should utilise the duty exemption facility as per the above-mentioned notification, for research purposes only. Non-research requirement such as the one for service activities, teaching, training, patient care, etc. should not be procured availing the facility.
- Of DSIR will not be responsible for any misuse of the duty exemption facility using this certificate. The onus that duty exemption has been availed for research purpose only lies with the institution
- 07. The institutions should introduce a chapter in its Annual Report dealing with the research & development work. This could contain the on-going research projects, achievements during the year, publications, patents if any, etc. The R&D income & expenditure should be separately shown in an annexure/schedule in the statement of accounts in the Annual Report.
- 08. The registration will entitle the institutions to avail custom duty exemption on purchase of equipment, instruments, spares thereof, consumables etc. used for research & development subject to relevant Government policies in force from time to time. Such exemption will have to be separately applied for in the prescribed formats. The institutions should also abide by the terms & conditions of the customs notifications issued/amended from time to time.
- 09. In case of disposal/sale of R&D equipment, clearance from customs authorities will also be required in view of the applicable notification under which the equipment was imported in India.
- 10. The institution should submit details of the imports at the time of renewal in the proforma issued by DSIR.
- 11. Any violation of the terms & conditions mentioned above and/or provisions of taxation in force will make the institution liable to de-registration.
- 12. The institution will also conform to such other conditions for registration stipulated in the Guidelines, as may be specifically provided in the registration letter and notices placed on department official website (<a href="http://www.dsir.gov.in">http://www.dsir.gov.in</a>) from time to time.

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## **ANNEXURE - VII**

#### PROFORMA for FINANCIAL BID

- 1. Rate for each item shall be filled in **Column 3**. Leaving blank for any item **is NOT** permitted in the Financial Bid Form, in such cases the Bid will be treated as **non-responsive** and will be summarily rejected.
- 2. Conditional Bid shall not be considered and will be rejected outright.

# <u>LIST OF EQUIPMENTS & SPECIFICATIONS FOR STRUCTURAL LABORATORY IN THE</u> <u>DEPARTMENT OF CIVIL ENGINEERING, NIT MIZORAM</u>

| Sl No. | Name of Equipment                                                                      | Qnty. | Basic Rate<br>(INR in Figure) | Total Amount<br>(In Word) |
|--------|----------------------------------------------------------------------------------------|-------|-------------------------------|---------------------------|
| 1      | 2                                                                                      | 3     | 4                             | 5                         |
| 1.     | Computer Controlled Servo<br>Hydraulic Universal Testing<br>Machines (Capacity 2000kN) | 1     |                               |                           |
| 2.     | Automatic Compression Testing<br>Machine 3000 kN Capacity with touch<br>panel.         | 1     |                               |                           |
| 3.     | Channel Electronic Data Acquisition System                                             | 1     |                               |                           |
| 4.     | LVDT                                                                                   | 3     |                               |                           |

I/We have read and understand the tender for supply & installation of Equipments in the Structural Laboratory of Department of Civil Engineering, NIT Mizoram vide No. NITMZ/D-51/2022/3927 Dated03.02.2023 and other documents issued by you we hereby quote the Rates (inclusive of all taxes &duties) **except Goods & Services Tax (GST)** as above. GST Rates applicable shall be quoted separately.

| Date:  | [Signature]        |
|--------|--------------------|
| Place: | Name of the Bidder |
|        | Seal of the Bidder |