Sir,

Sub: Inviting Quotations for procurement of UNIVERSAL TENSILE TESTING MACHINE for CSTRI, BANGALORE. -Reg.

With reference to the subject cited above, I am to inform that this Institute invites quotation in two bid system through e-procurement for supply of UNIVERSAL TENSILE TESTING MACHINE TO CSTRI, BANGALORE as per the specification mentioned below:-

1. **TECHNICAL SPECIFICATION OF TENSILE TESTING MACHINE (UTM)**

Computer controlled Tensile testing machine confirming to working CRE principle. The machine should be capable of performing tensile and compression tests and also perform shear, flexure, peel, tear, cyclic and bend tests. Should able to handle testing of elastomeric materials with high elongations.

1. **Load capacity/Cells** : 5 kN & 10N
2. **Load measurement accuracy** : ±0.5% of reading down to 1/1000 of load cell capacity.
3. **Instrument Structure** :
   - Cross head : Machined solid block
   - Frame : Dual column testing system made of Solid base beam with adjustable heavy duty mounting feet
   - Built in mechanism (Built in micro switch / Emergency stop button) for instrument control in case of first level malfunctioning.

4. **Minimum speed** : 0.001 mm/min
5. **Maximum speed** : 3000 mm/min
6. **Max. load at full speed** : 5kN
7. **Return speed** : 3000 mm/min or more
8. **Position control resolution** : 0.2µm or better
9. **Crosshead speed accuracy** : ±0.1% of set speed.
10. **Vertical Test space** : 1250 mm or More
11. **Total cross head travel** : 1100 mm or More
12. **Gauge length** : Adjustable
13. **Position measurement Accuracy** : ±0.01 mm or 0.05% of displacement (whichever is greater)
14. **Min. Column spacing** : 400 mm or more
15. **Load cell recognition** : **Automatic transducer recognition for load cells and extensometers**
16. Data Acquisition rate at PC : Simultaneous on load, extension and strain channels.
17. Strain measurement accuracy : Meets or surpasses the ASTM E83 / ISO 9513 standards
18. Load weighing system should meet or surpass: ASTM E4 DIN 51221 and ISO 7500-1.
19. Machine Test Capability :
   - Tensile test
   - Compression test
   - Shear,
   - Flexure,
   - Peel,
   - Tear,
   - Cyclic
   - Bend tests
   - Seam strength
   - Stretch and growth properties
20. Humidity range : +20 to +90%, Non condensing.
21. Operating temperature : +10 to +35 °C or more
22. Pneumatic grips : For both 10N & 5KN load cells.
   1. One gripper suitable for testing fibres, yarns (10N)
   2. One gripper for fabric (5KN)
   3. One gripper for yarn/rope (5KN) for lea strength.
   4. Should have pneumatic grip foot controller.
   5. Should have all accessories for pneumatic gripping
23. Test area lighting.
24. Test cam for video recording
25. Branded Desktop computer system of latest generation processor for high speed operation and high data storage. Windows 10 compatible software and should be completely compatible with all the operations that can be performed with the UTM instrument provided.
26. Ink tank colour printer with USB port / synchronise with computer.
27. Training on operation and maintenance has to be provided.
28. Performance certificate of the same quoted model from past supplied customer along with the list of supply to public sector / govt. customers shall be provided without which the bid is considered technically non compliant.
29. Payment will be released only after verification of the machine as per the specifications

Manufacturer’s technical brochure of the machine has to be attached with the technical bid along with duly signed technical compliance statement for individual points, without which the bid is considered as non compliance.

TERMS & CONDITION :

1. The quotation in **two bid (Technical Bid & Financial Bid)** system should be uploaded in e-procurement only. ([website www.eprocure.gov.in](http://www.eprocure.gov.in)). The last date for upload the bid is **28. 01.2020** upto **2 P.M.** and the bill will be opened on **29. 01.2020** at **3 P.M.**
2. The rates quoted should be valid for 120 days. The equipment should be supplied within 60 days from the date of purchase order.

3. The equipment should be supplied to DIRECTOR, CENTRAL SILK TECHNOLOGICAL RESEARCH INSTITUTE, CENTRAL SILK BOARD, CSB COMPLEX, BTM LAYOUT, BANGALORE – 560 068.

4. Financial Bids should consist of unit price, Excise Duty, Insurance, Packing & Forwarding, Erection & Commissioning, Transportation Charges, Taxes etc.

5. The EMD equal to 2% of the total contract value should be sent by post in the form of Demand Draft drawn in favour of the Director, CSTR, Bangalore. A scanned copy of the Demand Draft should be uploaded along with technical bid. The EMD does not carry any interest. Please note that cheques will not be accepted. Quotation received without EMD will summarily be rejected.

6. The Supplier shall provide Warranty/Guarantee valid for a minimum period of 12 months from the date of installation of the equipment / machineries. Any defects noticed in the equipment /machineries which is unintentional shall be set right by the supplier free of cost for good performance of the equipments.

7. The equipment should be supplied strictly in conformity of the above specifications, failing which, the equipment has to be taken back at your own cost.

8. For delay & non supply of the item within the stipulated time, liquidated damages @ 0.5% per week will be deducted from the bill subject to a maximum of 10% of the total cost of the equipment.

9. The performance security equivalent to 5% of the total contract value in the form of Bank Guarantee issued by any Nationalized Bank which shall be valid till three months after the expiry of the Warranty period should be furnished to this Institute within 10 days from the date of receipt of purchase order in the prescribed format.

10. No advance payment will be paid. The payment will be released only after delivery of the equipment in good condition as per our specification, Erection and commissioning.

11. The bidders should submit the Bank Details i.e. Bank A/c.No., Bank Name, Branch, IFSC code, Mobile No, eMail ID etc. along with quotation.

Yours faithfully,

DIRECTOR