

INDIAN INSTITUTE OF TECHNOLOGY, DELHI  
DEPARTMENT MECHANICAL ENGINEERING

Ref:IITD/MED/PLN03/2012-13/AC-03

DATED: 09-01-2013

SUBJECT: N.I.Q. for the purchase of a Bi-axial testing system

Quotations are invited for the purchase of a bi-axial testing system as per the following specification. The quotation should reach in the office of Prof. A. Chawla (Room No. 421, Block II) latest by 10:00 AM on Feb 4, 2013.

Maximum load	5kN
Maximum specimen size	100 X 100 mm
Servo hydraulic actuator assembly with	<ul style="list-style-type: none"> <li>• A stroke of 50mm max in either direction</li> <li>• Maximum speed 2m/s (<math>\pm 1\%</math> or better)</li> <li>• Servo loop update at 5kHz or better</li> <li>• Load and displacement measurements with <ul style="list-style-type: none"> <li>○ Accuracy of 1% or better</li> <li>○ Resolution of 0.05% or better</li> <li>○ Sampling frequency of 100kHz or higher in each channel</li> </ul> </li> </ul>
Mechanical Clamp Jaws	Non-slip jaws with nylon grips and serrated faces. Possibility of replacing with new jaws, if needed.
Loading system	Programmable for different load cycles including quasi-static, ramp, cyclic loading and step loading (0.5ms rise time, 3ms fall time)
DA System	<ul style="list-style-type: none"> <li>• Standalone system with <ul style="list-style-type: none"> <li>○ 18 bit or better DA</li> <li>○ USB interface</li> </ul> </li> </ul>
Interface	USB interface with standard PC based systems running Windows 7 or higher
Software interface	Should have <ul style="list-style-type: none"> <li>○ GUI in Windows environment</li> <li>○ Interface with MS Office / Excel</li> <li>○ Libraries for linking to High Level Languages like C, C++, VC++, Java, Python and Matlab</li> </ul>
Environment Chamber (optional)	With temperature range of 5°C to 40°C
Biobath (optional)	Temperature range: ambient to 45°C
Bi-axial Video Extensometer (optional)	For strain measurement
Host Computer	For interfacing and DA support, with <ul style="list-style-type: none"> <li>○ i5 3.6GHz processor or better</li> <li>○ <math>\geq 24''</math> LCD / LED monitor</li> <li>○ 1TB HDD or better</li> <li>○ 8Gb Ram or better</li> </ul>

The following aspects should also be taken care of.

1. Separate sealed technical and sealed financial bids should be given in a single sealed envelope.
2. Validity of the quote should be atleast 90 days.

3. A warranty of atleast 3 year from date of installation should be given. Rates for an extended warranty / AMC beyond 3 years may also be given. The firm should commit to port the software / interface to newer hardware platform, if needed, for atleast 5 years.
4. Delivery should be within 30 days of placement of order.
5. A company profile should be included in the technical bid.
6. In case the bid is a given through an agent, a valid agentship certificate should be attached.
7. If the item is a proprietary item, a proprietorship certificate form the principle manufacturer should be included.
8. The profile should include the following at the minimum:
  - a. The parent company's base in India, its customer list and the number of pieces of testing equipment sold by it in India.
  - b. The Indian agent's profile highlighting its past experience and the number of pieces of similar testing equipment sold by it in India.
  - c. The Indian agent's plan on how the same shall be maintained, the capabilities of their maintenance team in India
9. Indian agent should also include a copy of letter enlisting with the Department of Expenditure, Ministry of Finance as per GOI requirements.
10. Accessories needed for functioning of the system should be included in the quote and clearly specified. Additional accessories available may also be quoted separately as optionals.
11. Delivery should be made on FOB basis only.
12. A signed hand filled compliance sheet as attached, stating whether each of the specifications asked for are being met or not, should be included in the technical bid.
13. If some specifications are not being met, deviations may be clearly stated. In the unlikely event that none of the vendors are able to meet all the specifications, the committee reserves the right to waive or relax any of the requirements at the technical evaluation stage.
14. No advance payment shall be made.
15. Payment will be made through wire transfer after successful installation.
16. The Quotation received after due date will not be considered.
17. The Institute reserves the right to reject any quotation without assigning any reasons.

After opening the technical bids, a technical presentation on the product may be sought in IIT. The committee will shortlist the bids based on an evaluation of the technical bid, the presentation, the efficiency / efficacy / ease of use / ability to maintain and other aspects of the equipment vis-à-vis the requirements. Financial bid would be opened only for the shortlisted companies.

(A Chawla)

## COMPLIANCE SHEET

Feature	Complies – Yes / No / Not Applicable (If no, deviation may be mentioned)
Maximum load	
Maximum specimen size	
Servo hydraulic actuator assembly with	
Mechanical Clamp Jaws	
Loading system	
DA System	
Interface	
Software interface	
Environment Chamber (optional)	
Biobath (optional)	
Bi-axial Video Extensiometer (optional)	
Host Computer	
Separate Sealed Financial and Technical Bids	
Validity of the quote > 90 days.	
A warranty > 3 year from date of installation	
Extended warranty / AMC rate quoted	
company profile included in the technical bid.	
valid agentship certificate attached.	
a proprietorship certificate form the principle manufacturer included. (if applicable)	
Profile includes the parent companies base in India, its customer list and the number of pieces of similar equipment sold by it in India.	
The profile includes the Indian agent's profile highlighting its past experience and the number of pieces of similar equipment sold by it in India.	
The profile includes the Indian agent's plan on how the same shall be maintained, the capabilities of their maintenance team in India	
Proof of THE COMPANY AS WELL AS THE INDIAN AGENT having sold similar systems IN INDIA is attached.	
A copy of letter enlisting with the department of expenditure, Ministry of Finance as per GOI requirements included.	
Accessories needed for functioning of the equipment are included in the quote and clearly specified.	
Delivery is on FOB basis only.	
A signed compliance sheet included	
Deviations form specifications are clearly stated in the compliance sheet	