

 IIT PALAKKAD	भारतीयप्रौद्योगिकीसंस्थानपालक्काड Indian Institute of Technology Palakkad अहलिआ एकीकृत कैम्पस, कोज़िहपारा Ahalia Integrated Campus, Kozhipara पालक्काड- 678557 Palakkad – 678 557	दूरभाषसंख्या/ Phone no: 04923 – 226 586/561 ईमेल/ Email : purchase@iitpkd.ac.in
---	---	---

Tender for Inviting Quotations

Ref No: IITPKD/CIE/MK/03/2018

Date: 18.04.2018

Due date for the tender: 03.05.2018 at 3.00 PM

Dear Sirs,

On Behalf of Indian Institute of Technology Palakkad quotations are invited for supply of “**Equipment For Testing Flexure and Instability of Structural Elements**” confirming to the specification in the Annexure.

- 1. Preparation of Bids:** - The tenders should be submitted **under two-bid system** (i.e.) Technical bid and Financial bid. The technical bid should consist of all technical details along with commercial terms and conditions. No prices should be included in technical bid. Financial Bid should indicate item – wise prices for the items mentioned in the technical bid. The technical bid and the Financial should be put in separate cover and sealed. Both sealed covers should be put into a bigger cover. If it is single bid cover, the quotation will be rejected automatically.
- 2. Opening of the Bids:** The offer/ Bids will be opened by the committee duly constituted for this purpose. The Technical bids will be opened and will be examined by the Technical Committee, Which will decide the suitability of the bid as per the specification and requirements. The financial offers/ bids will be opened only for the bidders **who meet all the Technical requirements.**
- 3. The Quotations** duly sealed and superscribed on the envelope **with the reference No. and due date, should be addressed to the undersigned so as to reach him on or before the due date stipulated above. Fax and Email quotation are not acceptable.**
- 4. The price** should be quoted per unit inclusive of and packing and delivery charges should be indicated. The offer/bids should be exclusive of Taxes However the percentage of taxes as on date should be clearly indicated.
- 5. The Quotations** should be valid for **sixty days** from the due date and the period of delivery required should also be clearly indicated.
- 6. Goods** shall not be supplied without an official supply order.

7. **Custom Duty:** Custom Duty which will be paid at a concessional rate against duty exemption certificate.
8. Quotations should be for **F.O.R. at IIT Palakkad, Transit Campus, West Pudussery, Kanjikode, Palakkad, Kerala**
9. **Concessional GST: Concessional GST@ 5% will be paid extra against GOI Notification 47/2017, Dated 14.11.2017**
10. **Payment:** Every attempt will be made to make payment within 30 days from the date of receipt of bill / acceptance of goods, whichever is later. No advance payment will be made. The Tenderer have to furnish the bank details along with tender such as Account No, Account Name, IFSC Code etc.,
11. **Submission of Bids:** Quotation should be sent to the following address “**The Registrar, Indian Institute of Technology Palakkad, Ahalia Integrated Campus, Kozhipara, Palakkad -678 557, Kerala**”, Phone No: **04923 226 586/561** , Email : **purchase@iitpkd.ac.in**
12. **Delivery Period:** The quotation should indicate clearly when delivery and installation will be made.
13. **Delay in Supply or Liquidate damages:** If the supplier fails to deliver the stores within the time specified in the purchase order, the purchaser will recover from the supplier as liquidated damages a sum of one- half of one percent (0.5%) of the P.o value of the undelivered stores for each calendar week of delay. The total liquidated damages shall not exceed five percent (5%) of the P.o price of the unit or units so delayed. Stores will be deemed to have been delivered only when all their component parts are also delivered. If certain components are not delivered in time, the stores will be considered as delayed until such time as the missing parts are delivered.
14. **Late offer:** The quotation received after due date will not be considered. Please ensure that your offer is sent well in advance to reach the Institute by the due date.
15. **Warranty:** The bidder shall specify the warranty period clearly for the furniture.
16. **Acceptance and Rejection:** IIT Palakkad has the right to accept the whole or any parts of the Tender or portion of the quantity offered or reject it in full without assigning any reason.

Yours faithfully

Registrar, IIT Palakkad

**EQUIPMENT FOR TESTING FLEXURE AND INSTABILITY
OF STRUCTURAL ELEMENTS**

VENDOR QUALIFICATION REQUIREMENTS

1. The equipment should be supplied by the original equipment manufacturer or their authorised dealer. In case of authorised dealer, the authorization letter/document from the original equipment manufacturer should be submitted along with the technical bid.
2. The vendor should submit the catalogue showing the full technical specifications of the equipment along with the technical bid, and this will be used for verification of the technical bid.
3. The technical bid shall be evaluated for acceptability by the technical committee. Before issuing the purchase order, the eligible vendor should be prepared to make a technical presentation within 15 days from the date of notification, if required.
4. The vendor should have supplied similar equipment to IITs, NITs, DRDO, ISRO, or CSIR labs within the past five financial years (2014-15 to 2018-19) and currently operational. The equipment supplied should be relevant to the structures laboratory with technical specifications similar to IIT Palakkad's specifications. Copy of purchase order, with the net value of a single purchase order exceeding 10 lakhs should be enclosed. The vendor should provide the details of such customers (complete address, email ID, telephone no., contact person etc.) along with the technical bid.
5. IIT Palakkad may seek a feedback about the performance of the equipment and after sales service of the vendor from such users, before shortlisting the technical bid. Feedback about the vendor and after sales support may also be sought from users having similar equipment, who are not listed by the vendor.
6. If required by IIT Palakkad, the vendor should arrange for demonstration and performance test of the operational equipment already installed in another facility.
7. The vendor should have competent and reliable service personnel in India. The details of the service provider should be provided along with the technical bid. In case of breakdown of the equipment, the vendor/authorized service provider should have the capability to arrange for the required service within 48 hours.
8. The installation and demonstration of the system should be done within one week from the date of delivery of the equipment to IIT Palakkad, by trained and experienced service engineers from the manufacturer/vendor. The performance of the system should be demonstrated to the satisfaction of the faculty/staff of IIT Palakkad.

9. The bid should include a declaration for one year warranty, followed by the terms of extended warranty for another two years. The cost of extended warranty should be quoted separately in the financial bid.
10. The vendor is responsible for all cost related to insurance, freight and transport of the equipment to IIT Palakkad's facility.

TECHNICAL SPECIFICATIONS AND COMPLIANCE SHEET

The vendor should fill the last two columns of this document, sign each page and submit along with the technical bid.

† In this column, the vendor should provide confirmation whether they will be able to supply the below items by stating ‘YES’ or ‘NO’.

* While major deviations are not allowed, minor deviations may be justified in this column.

‡ In this column, the vendor should provide the page number and item number or serial number from their technical catalogue, which shows the specification of the item. Incomplete forms may be rejected.

Experiment Name	Specifications / Requirements	Confirmation by vendor (Yes/No) †	Justify deviations (if any) *	Page no. and Item / Sl. no. ‡
General	All apparatus should be compatible with 220 V single phase AC or 415 V three phase AC - 50Hz supply.			
	All equipment should be setup on a table top.			
Plastic bending of beams	The apparatus should consist of a test frame, supports, loading device and deflection and load measurement devices			
	The end conditions should be configurable to obtain fixed, pinned, and roller support conditions.			
	Load applied with a screw mechanism.			
	Load cell or any alternate mechanism to measure the applied load.			
	Gauges for measurement of deflection			
	Maximum load: at least 500 N			
	Deflection gauge travel: 0-20 mm			

Experiment Name	Specifications / Requirements	Confirmation by vendor (Yes/No) †	Justify deviations (if any)*	Page no. and Item / Sl. no. ‡
	<p>Samples: Mild steel beam 12 nos.</p> <p>Length 800-1000 mm, Cross section 8-20mm × 3-8 mm</p>			
Bending test on indeterminate beams	Support conditions: simply supported, cantilever, propped cantilever, fixed support, over hanging, two span continuous.			
	Apparatus should consist of at least 3 supports			
	Should be possible to fix the loads and supports at desired locations.			
	At least one adjustable dial gauge for measuring deflection at any desired point.			
	Load applied to the beam using weights and hangers, hangers should be movable and locked to designated positions to attain various loading conditions.			
	At least four weight hangers and four sets of weights.			
	Should be able to test specimens of length ≥ 800 mm.			
	Measuring range: Reaction load cell/load measuring gauge 0-10 Nor higher; Deflection dial gauge travel 0-10 mm.			
Test beams: Steel, brass and aluminium beams of same dimensions. ≥ 800 mm long, 20-25 mm wide and 4-7 mm thick.				
Unsymmetrical bending of beams	Chuck/clamp at one end to hold the specimen firmly.			
	Should be able to test beams with I, L and U cross-sections.			
	Two deflection indicators to measure horizontal and vertical displacements.			

Experiment Name	Specifications / Requirements	Confirmation by vendor (Yes/No) †	Justify deviations (if any)*	Page no. and Item / Sl. no. ‡
	At least one set of weights and hangers to apply load.			
	Eccentricity of load should be adjustable to achieve symmetrical, unsymmetrical and combined bending and torsional loading.			
	Determination of shear centre of unsymmetrical sections should be possible			
	Maximum load capacity: 10 N.			
	Sample: I, L and U section beams of length 400-600mm 15 numbers each. Material: Aluminium or steel			
Verification of Euler's Theory	Apparatus to study buckling behaviour of axially loaded columns			
	Various boundary conditions like both ends fixed, both ends pinned, one end fixed other end pinned, one end fixed other end free should be possible			
	Distance between the chucks should be adjustable to hold specimens of various length.			
	Screw jack mechanism with load cell or any alternate mechanism to apply axial load.			
	Dial gauge or deflection indicator to measure lateral deflection			
	Force indicator or force gauge to display applied force			
	Apparatus should be able to test specimens of length 300-700 mm			
Maximum load capacity: 500-2000 N				

Experiment Name	Specifications / Requirements	Confirmation by vendor (Yes/No) †	Justify deviations (if any)*	Page no. and Item / Sl. no. ‡
	Test columns: Columns made from steel or aluminium. Length 300-700 mm, cross section 10-25 mm wide × 1.5-6 mm thick			
	Deflection dial gauge travel: 0-10 mm			