

Domestic tender notification for the procurement of TEM SAMPLE PREPARATION SETUP

A purchase of a sample preparation setup is planned. This setup is required to prepare samples for microstructure characterization using the Transmission electron microscope. The detailed technical specifications for an ideal setup are mentioned below.

TECHNICAL SPECIFICATIONS

Scope of work: Supply, installation, and commissioning of electropolishing setup.

S. No.	TEM SAMPLE PREPARATION SETUP	
1	Equipment details	<ul style="list-style-type: none"> • Control unit: Fully automatic, microprocessor-controlled control unit for electrolytic thinning of metal specimens. With an electronic thermometer and adapter for the connection of the Polishing Unit. A Polishing Unit is required. • Power supply: 1 x 220-240 V / 50-60 Hz, convertible to 1 x 100-120 V/ 50-60 Hz • Polishing unit: For electrolytic thinning of metal specimens. With specimen holder for 3 mm dia. specimens, set of jets, pump, cooling coil, insulated PVC container, non-insulated PVC container, and built-in photocell • Tape kit: For electrolytic blanking of 3 mm / 2.3 mm specimens to be electrolytically thinned. 1 roll of tape and 1 hole punch • Sets of Jet: Twin jets should be used. For specimen holder with 1 mm dia. Bore. For specimen holder with 2.5 mm dia. bore. • Specimen Holder: For the preparation of thin foils for TEM. For polishing unit. For 3 mm dia. specimens • For pre-thinning of thin foils for TEM. For the polishing unit, the Diaphragm aperture should be 10 mm dia. For the preparation of thin foils for TEM. For polishing unit. For 2.3 mm dia. specimens • Electrolytes for polishing: Stainless steels, aluminum and aluminum alloys, copper and copper alloys, nickel alloys, tin and titanium, molybdenum, titanium, zirconium, and vanadium • The external cooling unit and tubing for connection to the external cooling unit should be included and must be sourced alternatively. • Display screen, Touch pad control • Database for defined methods for conventional metals steels, aluminum, titanium, magnesium, etc. • Should display the scan curve while the user selects and sets the voltage • Automatic calibration of the voltage-current curve, electrolyte flow rate, and selection of the optimum polishing conditions, Automatic clean-up procedures • There should be a three-year warranty
2	Pre-dispatch inspection	<ul style="list-style-type: none"> • Equipment should be checked before shipping. Data should be shared with IISc, and approval should be obtained before shipping.
3	Acceptance	<ul style="list-style-type: none"> • The supplier must demonstrate all the functions of the system according to the specifications after successful commissioning at IISc. • Within one week of delivery, if the supplier cannot demonstrate the equipment's functioning, the tender will be canceled.

TERMS AND CONDITIONS

1. Two-bid system (separate technical and financial bids) in sealed tenders.
2. The technical bid must specify the prescribed technical specifications without including the prices. Please provide the specifications under each subhead and bullet point in detail. Unique characteristics may be highlighted.
3. Vendors who include price information in the technical bids will be automatically disqualified.
4. The quote should come only from an Indian Original Equipment Manufacturer (OEM) or their Indian authorized distributor.
5. The quotations should be on FOR-IISc Bangalore basis in INR only.
6. **The Vendors must have supplied at least five testing systems. Preference will be given to the vendor who has supplied it to centrally funded technical institutes (IISc, IITs, NITs, etc.) and national research labs (DAE, DRDO, DMRL, NAL, NML, and equivalent) in the last five years. A detailed list of users and primary users' contact information should be provided.**
7. **At least three independent reference letters from India (from institutions mentioned in point 4) should be provided during tender submission (as part of the technical bid). IISc may contact more users to obtain independent references. The committee will have the right to reject a bid based on reference letters.**
8. The financial turnover of the equipment manufacturer in the previous financial year should be more than or equal to 10 times the total order value. The bidder shall furnish specific details of the company's performance.
9. **Technical bids will be opened first. IISc may seek clarifications after opening technical bids and may ask vendors to perform some example experiments on the samples given by IISc to demonstrate the promised technical specifications. Vendors may be required to give presentations.**
10. Several items require detailed information from the supplier. If information is not provided against any of these items, this will disqualify the supplier.
11. After technical evaluation by a committee, vendors may be asked to re-quote in a specific format to facilitate the comparison of prices.
12. Price bids of only technically qualified vendors will be considered.
13. **Prices are to be quoted separately for the system, including mandatory requirements and optional items. Prices should be quoted in adequate detail with relation to packing details to cover insurance compensation in case of damage to any specific modules.**
14. Separately, indicate the price of spares listed above in terms of unit cost. The price of these spares will be included in the price comparison. Any additional spares recommended by the company will be considered for ordering but will not be included in the comparison. The buyer reserves the right to make the final decision on the spares that have been ordered.
15. IISc also reserves the right to cancel the tender at any time without assigning any reason.
16. Indicate the delivery period.
17. Orders will be placed at the lowest bid from a technically qualified vendor.
18. The tender documents can be sent to the following address by 17th July 2024:

The Chairman
Department of Aerospace Engineering
Indian Institute of Science, Bangalore 560012
Karnataka
India
Contact person: ankurchauhan@iisc.ac.in

Annexure-I

MANUFACTURER's AUTHORISATION FORM

[The bidder shall require the manufacturer to fill in this form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by the person with the proper authority to sign documents that are binding on the Manufacturer.]

Date: [insert date (as day, month and year) of Bid Submission]

Tender No.: [insert number from Invitation for Bids]

To: The Chair, Department of Aerospace Engineering, IISc, Bengaluru 560012

We [insert complete name of Manufacturer], who are official manufacturers of [insert full address of Manufacturer's factories], do hereby authorize [insert complete name of Bidder] to submit a bid, the purpose of which is to provide the following Goods, manufactured by us [insert name and or brief description of the Goods], and to negotiate and sign the Contract subsequently.

We hereby extend our full guarantee and warranty with respect to the Goods offered by the above firm.

Signed: [insert signature(s) of authorized representative(s) of the Manufacturer]

Name: [insert complete name(s) of authorized representative(s) of the Manufacturer]

Title: [insert title]

Duly authorized to sign this authorization on behalf of: [insert complete name of Bidder]