

DEPARTMENT OF MATERIALS ENGINEERING
INDIAN INSTITUTE OF SCIENCE (IISc), BENGALURU, INDIA

Global tender notification for the procurement of- ELECTROPOLISHING SETUP
(Last Date for Submission: 25th March 2024)

GTE Approval No.: IISc-GTE-2023-327

Tender Notification Ref No.: MT/GL-TNDR/SSU-DRDO-DIA/23-24/01

Date: 4th March 2024

This is a **Request for Quote (RFQ)** for supply of “**Electro Polishing Setup**” for Department of Materials Engineering Indian Institute of Science, Bangalore. The tender should be submitted in two separate sealed envelopes: one containing the **technical bid** and the other containing the **commercial bid**, both of which should reach us, duly signed on or before **25th March 2024 on or before 1700 hrs.** The bids should be addressed to:

The Chair
Department of Materials Engineering
Indian Institute of Science
Bangalore – 560 012
Kind Attn.: Prof. Satyam Suwas
Email: satyamsuwas@iisc.ac.in/chair.mte@iisc.ac.in

A purchase of electropolishing setup is planned. This setup is required to electro polish samples for microstructure characterization using electron backscattered diffraction and electron channel contrast imaging. Below, the detailed technical specifications for an ideal setup are mentioned.

Tender Summary

1	Tender number	<i>MT/GL-TNDR/SSU-DRDO-DIA/23-24/01</i>
2	Tender Date	<i>04.03.2024</i>
3	Item Description	Electro Polishing Setup
4	Tender Type	Two Bid System: (a) Technical Bid (Part A) (b) Commercial Bid (Part B)
5	Place of Tender submission	Prof. Satyam Suwas Chair, Department of Materials Engineering, Indian Institute of Science, Bangalore - 560012
6	Last date & Time for submission of tender	25th March 2024 at 5.00 P.M

General Terms and Conditions:

1. The bid should be submitted in two-cover system, i.e., technical bid and commercial bid separately in sealed covers. The technical bid should contain all commercial terms and conditions, except the price.
2. In the commercial bid, the price should be inclusive of all discounts.
3. The lead time for the delivery of the items should not be more than 16 weeks from the date of receipt of our purchase order. It should be clearly mentioned in the technical and commercial bids.
4. All the quotations must be valid for at least 90 days at the time of submission.
5. List of customers and references: It is preferable for the Bidder should have supplied similar equipment in centrally Funded Technical Institutes (IITs, IISC, IISER, NIT). Please provide the details and contact information.
6. The Bidder must not be blacklisted/banned/suspended or have a record of any service-related dispute with any organization in India or elsewhere. A declaration to this effect should be provided.
7. Items in addition to those listed in the technical table that you would like to bring to the attention of the committee, such as data sheets, technical plots etc. can be listed at the end of the compliance table.
8. Vendors are encouraged to highlight the advantage of their product over comparable products from the competitors.
9. If needed, a meeting for any technical clarifications can be scheduled with the undersigned by sending an email.
10. The Institute reserves the right to accept or reject any bid, or to annul the bidding process and reject all bids, at any time prior to the award of contract without thereby incurring any liability of the affected bidder or bidders.
11. After the award of purchase order, the vendor must provide an Order Acknowledgement within 30 days from the receipt of the Purchase Order.

The tender documents can be sent at the following address:

The Chairman
Department of Materials Engineering
Indian Institute of Science, Bangalore
560012
Karnataka (INDIA)

TECHNICAL SPECIFICATIONS

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

S. No.	ELECTROPOLISHING SETUP	
1	Electropolishing unit	<ul style="list-style-type: none"> • Fully automatic, microprocessor-controlled electrolytic polishing and etching apparatus. Complete with control unit, polishing unit, and external etching unit. • Power supply: 1 x 220-240 V or 1 x 100-120 V/ 50-60 Hz • Output voltage: • 0-100V (polishing) • 0- 25V (Etching) • 0 -15V (External etching) • The Polishing unit for low temperature should be able to work at liquid nitrogen temperatures. • With one set of masks, one cathode and two electrolyte containers. 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 displays 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 • Electrolytes for polishing: Stainless steels, aluminum and aluminum alloys, copper and copper alloys, nickel alloys, tin and titanium, molybdenum, titanium, zirconium, and vanadium.
2	Pre-dispatch inspection	<ul style="list-style-type: none"> • Based on a mutually agreed testing plan, on-site testing on samples provided by IISc and qualification will be done before the equipment is made ready for shipping. Data should be shared with IISc, and approval should be obtained before shipping. • Supplier should furnish the compositional analysis of pull rods, fixtures, adapters, grips and couplers 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

- ✚ Should have proven record of successful installations within Indian education/research institutes. Proof of such installation must be enclosed.
- ✚ The OEM/Supplier should have trained service engineers stationed in India for any on-site service requirement, details to be provided in the offer.
- ✚ OEM/supplier should have requisite stock of necessary spare parts in India.
- ✚ Company should have a minimum annual turnover of INR 5 crores.

TERMS AND CONDITIONS

1. Warranty period: 3 years.
2. Supplier Credibility:
 - a. Supplier should compulsorily indicate details of facilities / expertise/ qualification of support staff in India. Factory trained engineer/s should be available in India for complete product support.
 - b. Please enclose User list in INDIA.
 - c. Minimum 3 Reference letters of similar system supplied in INDIA need to be submitted for further consideration.
4. Institute reserves the right for final selection of items.
5. Vendors may quote for any other items/accessories separately as “Optional Items”.

For queries or clarifications, please contact:

Dr. Ankur Chauhan (Assistant Professor) at ankurchauhan@iisc.ac.in

Annexure-I

Note: Compliance Certificate must be enclosed with the technical bid. Non submission of Compliance Certificate will lead to disqualification of the bidder.

S. No.	ELECTROPOLISHING SETUP	C	NC	D	Remarks
1	<p>Electropolishing unit</p> <ul style="list-style-type: none"> • Fully automatic, microprocessor-controlled electrolytic polishing and etching apparatus. Complete with control unit, polishing unit, and external etching unit. • Power supply: 1 x 220-240 V or 1 x 100-120 V/ 50-60 Hz • Output voltage: <ul style="list-style-type: none"> • 0-100V (polishing) • 0- 25V (Etching) • 0 -15V (External etching) • The Polishing unit for low temperature should be able to work at liquid nitrogen temperatures. • With one set of masks, one cathode and two electrolyte containers. 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 displays 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 • Electrolytes for polishing: Stainless steels, aluminum and aluminum alloys, copper and copper alloys, nickel alloys, tin and titanium, molybdenum, titanium, zirconium, and vanadium. 				
2	<p>Pre-dispatch inspection</p> <ul style="list-style-type: none"> • Based on a mutually agreed testing plan, on-site testing on samples provided by IISc and qualification will be done before the equipment is made ready for 				

		<p>shipping. Data should be shared with IISc, and approval should be obtained before shipping.</p> <ul style="list-style-type: none"> • Supplier should furnish the compositional analysis of pull rods, fixtures, adapters, grips and couplers 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 				

C-Compliant, NC- Non Compliant, D-Deviation

Annexure-II

MANUFACTURERS' AUTHORIZATION 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 Materials Engineering, IISc, Bengaluru-560012**

WHEREAS

We [insert complete name of Manufacturer], who are official manufacturers of [insert full address of Manufacture'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 subsequently negotiate and sign the Contract.

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]

Prof. Satyam Suwas
Chair, Department of Materials Engineering
Indian Institute of Science
Bangalore, Karnataka 560012
satyamsuwas@iisc.ac.in
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