





		interchangeable and makes it space saving....
4	Representative of Harley instruments, requested to remove carbon rods in the sl no. 12 (Carbo metals needed).	It was informed him that the modified specification (sl no 12)  Caron rods 3mm diameter will be deleted
5	Representative of Harley instruments, requested – MFCs for controlling gas flows in the Ion milling equipment technical specs	Modified specification will be – The gas flow and therefore the current shall be set MFCs and current measured during this process.
5	Representative of Harley instruments, requested – MFCs for controlling gas flows in the Ion milling equipment technical specs	Modified specification will be – The gas flow and therefore the current shall be set MFCs and current measured during this process.

Technical committee has also decided to add following points –

- (1) All items should be supplied by the single vendor.
- (2) The Vendor should be capable of installation & commission of the equipment on-site. After the installation, the vendor should be capable of preparing NISER Samples & demonstrating the capability of the installed equipment by preparing good quality TEM samples. The vendor should also have the capability to train NISER Users to prepare good quality TEM Samples using the installed facility.
- (3) Warranty should have 1 year Standard + 2 Year Comprehensive Warranty (optional)

The bidders were informed that date of submission of bids will be extended and shall be published on the website of NISER. The bidders were also informed that they should also regularly visit the NISER website to know the last date of submission bids.

In case of any further information/clarification, they may send email to [sbarman@niser.ac.in](mailto:sbarman@niser.ac.in) (Dr. Sudip Barman).



Dr. Pratap Kumar Sahoo,



Dr. Kartik Senapati



Dr. Sudip Barman  
Con behalf of Dr. Sudip Barman



राष्ट्रीय विज्ञान शिक्षा एवं अनुसंधान संस्थान, भुवनेश्वर  
(परमाणु उर्जा विभाग, भारत सरकार का एक स्वयं शासित संस्थान)  
**NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH**  
(AN AUTONOMOUS INSTITUTE UNDER DEPT. OF ATOMIC ENERGY, GOVT. OF INDIA)

**Notice Inviting Tender No. NIT-08/2017(2 Part Tender)**

**TEM SAMPLE PREPARATION UNIT**

**Cost of Tender is 1500.00 (Non Refundable)**

## Paper Notice



**NATIONAL INSTITUTE OF SCIENCE EDUCATION & RESEARCH  
JATNI CAMPUS, P.O. - JATNI  
KHURDA – 752050, ODISHA, INDIA  
Public Tender Notice (2 Part Tender)**

Sealed Tenders are invited on behalf of the Director, National Institute of Science Education and Research, Jatni from the manufacturers(Indian or Foreign) and their authorised reseller/Indian agent only for supply & installation of the following items:-

<b>Sl. No.</b>	<b>Name of the Items</b>	<b>Tender No.</b>	<b>Name of Department</b>	<b>Indent No.</b>	<b>Qty.</b>	<b>EMD in INR</b>
01	<i>TEM SAMPLE PREPARATION UNIT</i>	<i>NIT-08/2017</i>	School of Physical Science	<i>NC-000813-12-R&amp;D-NIS-5.10-0100-16-17</i>	01 Nos	4,60,000.00

For all other details please visit the NISER web-site address: [www.niser.ac.in](http://www.niser.ac.in) directly.

Stores & Purchase Officer



**NATIONAL INSTITUTE OF SCIENCE EDUCATION & RESEARCH**  
**JATNI CAMPUS, P.O. – BHIMPUR-PADANPUR, VIA-JATNI**  
**KHURDA – 752050, ODISHA, INDIA**  
**Tender Notice No. NIT-08/2017 (2 Part Tender)**

Sealed Tenders are invited on behalf of the Director, National Institute of Science Education and Research, Jatni from the manufacturers(Indian or Foreign) and their authorised reseller/Indian agent only for supply & installation of the following items:-

<b>Sl. No.</b>	<b>Name of the Items</b>	<b>Tender No.</b>	<b>Name of Department</b>	<b>Indent No.</b>	<b>Qty.</b>	<b>EMD in INR</b>
01	<i>TEM SAMPLE PREPARATION UNIT</i>	<i>NIT-08/2017</i>	School of Physical Science	<i>NC-000813-12-R&amp;D-NIS-5.10-0100-16-17</i>	01 Nos	4,60,000.00

**NB: PARTIES REGISTERED WITH SSI/DGS&D/DAE (REGISTRATION FOR ABOVE PRODUCT) AND FOREIGN PARTIES QUOTING DIRECTLY ARE EXEMPTED FROM PAYING EMD ONLY . THERE IS NO EXEMPTION FOR TENDER COST .**

Interested parties may collect the Tender Documents from the Dy. Controller of Accounts, NISER, on payment of Rs.1500/-(Non Refundable).The Tender document can also be downloaded from NISER website upto **16th Feb,2017**. The Tender, complete in all respects should be submitted within **05.30 p.m.** on or before **20th Feb,2017** along with prescribed Earnest Money Deposit.

Bidders who submit the form downloaded from the web site must attach Demand Draft of requisite amount Rs1500/- (cost of tender document) prepared in favour of the FINANCE OFFICER, NATIONAL INSTITUTE OF SCIENCE EDUCATION & RESEARCH with their bids.

NISER reserves the right to accept or reject any or all the Tenders without assigning any reason.

**Stores & Purchase Officer**

**NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH**  
**NIT OPEN DOCUMENT (2 PART BID)**  
**SUPPLY & INSTALLATION OF**  
***TEM SAMPLE PREPARATION UNIT***

National Institute of Science Education & Research (NISER), Jatni is an Autonomous Institute under Dept of Atomic Energy. NISER would like to procure the following equipment. The Technical Specifications Schedule of Requirements and Allied Technical details are given in Part-1 of tender document.

- **Item: *TEM SAMPLE PREPARATION UNIT***
- **Tender Enquiry No: *NIT-08/2017***
- **Last date of sale of Tender document : 16th Feb,2017 Upto **05.30PM****
- **Last date of submission of bid-20th Feb,2017 Up to **5.30 P.M****
- **Opening of Technical Bids: 21st Feb,2017, AT **02.30 PM****
- **Date and Time of Pre-bid meeting (Technical discussion only )- 10<sup>th</sup> Feb,2017 ,At-12.00 P.M in conference hall of school of physical sciences .**

Sealed tenders are invited for supply and installation of *TEM SAMPLE PREPARATION UNIT* in the National Institute of Science Education & Research, Jatni. The tender document consists of the following two parts.

Part-1: "TERMS & CONDITIONS" & "TECHNICAL BID" of the tender.

Part-2: "FINANCIAL BID" of the tender.

The sealed envelope containing "Terms & Conditions", "Technical Bid" and "Financial Bid" on prescribed tender document should reach to the Stores & Purchase Officer, National Institute of Science Education & Research, Jatni on or before **20th Feb,2017 upto 5:30 p.m.** otherwise the tender will not be accepted.

The sealed envelope of the bidders containing Part-1 "Terms & Conditions" and "Technical bid" shall be opened on **21st Feb,2017 at 02:30 p.m** One representative of each vendor may participate at the time of opening the bids (The representative must have the valid authorisation from their respective company for attending the tender opening meeting). The Part -2 "Financial Bid" of only those parties who qualify in Part -1 will be opened on a later date. The date of opening will be informed to each qualified party separately.

**(Deepak Srivastava)**  
**Stores & Purchase Officer**

**The Institute can provide following documents.**

1. **Custom Duty / Excise duty exemption certificate.**
2. **Road permit for entering in Orissa, Party has to pay Entry Tax**

**The Institute can't provide following documents.**

1. **Form D for Central Sales tax/IIID for Orissa commercial Taxes.**

**COST OF TENDER IS RS. 1500/- (NON REFUNDABLE).**

**This is payable in cash or Demand Draft of a scheduled Bank in favour of Finance Officer, National Institute of Science Education and Research, Jatni.**



**PART - 1**  
**TERMS & CONDITIONS**  
**FOR SUPPLY AND INSTALLATION**  
**OF**  
**TEM SAMPLE PREPARATION UNIT**  
**FOR**  
**NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, JATNI**

1. Director, National Institute of Science Education & Research, Jatni (NISER) invites sealed tenders for *TEM SAMPLE PREPARATION UNIT* from the Manufacturer and their authorised reseller only .

**Pre-Qualification criteria -**

- A.** Should have satisfactorily completed **similar 02-03 supply** in last 05 year(at least one of them in Central Government/Central Autonomous Body/Central PSU)
- B. Similar or Similar Nature of work means** Supply & Installation of *TEM SAMPLE PREPARATION UNIT* for any of the following
  - a) Government/Autonomous Institutions**
  - b) Government Research Centres**
  - c) Universities**
  - d) Autonomous/Reputed Private Research Centres**
  - e) Purchase Orders / Completion certificates if any, for supporting above requirements.**

**Bidders who qualify in Pre-Qualification criteria will only be consider for further evaluation .**

- 2. The Bidders are requested to give detailed tender in the prescribed forms in two Bids  
i.e. Part - I Technical Bid.  
Part - II Commercial Bid.
- 3. **Contact for information:** (Only E-mail enquiries will be entertained)
- 4. **For Technical Information of :** *TEM SAMPLE PREPARATION UNIT*  
**Dr. Subhankar Bedanta**  
School of Physical Sciences, NISER.  
E-Mail – **[sbedanta@niser.ac.in](mailto:sbedanta@niser.ac.in)**

**For Information regarding Commercial & all other Terms & Conditions:**

Mr. Deepak Srivastava  
Stores & Purchase Officer  
National Institute of Science Education & Research, Jatni  
E-Mail-[spo@niser.ac.in](mailto:spo@niser.ac.in)

**4. Supply means:**

“Supply, Installation, Commissioning and satisfactory demonstration of the whole equipments”.



If any charges extra are payable for Installation and Commissioning, the same should be specified in the commercial offer.

#### **5. Submission of Bids:**

(a) Place: Office of Stores & Purchase Officer, NISER, Jatni.

(b) Time and Date of Submission: up to **05.30 PM on 20th Feb,2017**

(c) Time and Date of opening Technical Bid: At **02.30 P.M on 21st Feb,2017**

NISER will not be responsible, for submission / delivery of quotation at wrong places other than the Office of Stores & Purchase Officer, NISER, Jatni.

#### **6. Two Bid System: -**

The two bid system should be followed for this tender. In this system the bidder must submit his offer in two separate sealed envelopes. Both the technical bid and commercial bid envelopes should be securely sealed and stamped separately for each quoted equipment and clearly marked as “Envelope No.1 – Technical Bid” and “Envelope No.2 – Commercial Bid” respectively. Both the sealed envelopes should be placed in a third larger envelope. The main envelope which will contain both the bids should be super scribed with our tender enquiry No **NIT-08/2017** due on **21st Feb,2017 with name of the equipment & department** and to be submitted to the address given below so as to reach on or before **05.30 PM on 20th Feb,2017. Separate envelope should be used for each item super scribing name of the indent.**

Stores & Purchase Officer,  
National Institute of Science Education & Research,  
Jatni Campus, PO-Bhimpur-Padanpur, Via-Jatni, Khurda - 752050

#### **The envelopes must be super-scribed with the following information:**

- Tender Reference Number
- Name of the Equipment
- Name of the Department
- Due Date
- Name of the Vendor
- Envelope No. 1: Shall contain “Acceptance of Terms & Conditions”, “Technical Bid” and Earnest Money Deposit (EMD)  
The technical offer should not contain any price information.
- Envelop No.2: Shall contain financial bid only.

The Technical Bid must be submitted in an organized and structured manner. No brochures/leaflets etc. should be submitted in loose form. Please indicate page nos. on your quotation eg. If the quotation is containing 25 Pages, please indicate as 1/25, 2/25, 3/25 -----25/25.

**Printed conditions of the vendor submitted with the tender will not be binding on National Institute of Science Education & Research, Jatni.**

#### **Important Instruction**

The parties are requested to make separate bid (technical & financial both) for each quoted equipment along with the requisite amount of EMD.

**The Technical Offer should comprise of the following:**

- a) Tenders, which are submitted without following the Two-Bid Offer System, will summararily be rejected.
- b) The technical offer should be complete to indicate that all products and services asked for are quoted. Each page of the bid and cutting/corrections shall be duly signed and stamped by the bidder. Unsigned Tenders will also be rejected. Failure to comply with this requirement may result in the bid being rejected.
- c) The purpose of certain specific conditions is to get or procure best product/service etc. for NISER. The opinion of Technical Committee shall be the guiding factor for technical short listing.
- d) The earnest money deposit as indicated against the item should be enclosed along with the terms & conditions & technical bid duly signed and stamped in the form of Account Payee Bank Draft payable on any branch of Nationalised/Schedule Bank at Bhubaneswar/ Jatni in favour of "Finance Officer, National Institute of Science Education & Research, Jatni, in a separate sealed envelope. All tenders submitted without requisite amount of earnest money shall be rejected and their technical and financial bids shall not be opened. No interest is payable on EMD. The EMD will be returned to the bidders(s)/Agents whose offer is not accepted by NISER within one month from the date of the placing of the final order(s) on the selected bidder(s). In case of the bidder(s) whose offer is accepted the EMD will be returned on submission of Performance Bank Guarantee (if applicable). However, if the return of EMD is delayed for any reason, no interest /penalty shall be payable to the bidders.

**EMD EXEMPTION:**

**PARTIES REGISTERED WITH SSI/DGS&D/DAE. REGISTRATION CERTIFICATE SHOULD HAVE ITEM /EQUIPMENT REQUIRED IN TENDER AND FOREIGN PARTIES QUOTING DIRECTLY ARE EXEMPTED FROM PAYING EMD. FOREIGN PARTIES QUOTING DIRECTLY UNDER ORIGINAL SEAL AND SIGNATURE (NOT SCANNED) WILL GET THE EXEMPTION.**

**The EMD shall be forfeited:**

If the bidder withdraws the bid during the period of bid validity specified in the tender. In case a successful bidder fails to furnish the Performance Bank Guarantee (if applicable).

- e) Undertaking that the successful bidder agrees to give a Performance Bank Guaranty of 10% of the purchase order value in favour of "Director, National Institute of Science Education & Research, Jatni valid till warranty period.

**Performance Bank Guarantee:**

Within ten (10) days of the award of contract, the vendor shall furnish a Performance Bank Guarantee amounting to 10% of the purchase order value in the form of Bank Guarantee favouring the Director, National Institute of Science Education & Research, Jatni valid till completion of warranty period.

- f) Duly filled in Technical Bid with proper seal and signature of authorized person on each page of the bid should be submitted and the same should accompany with complete specifications and drawings, Manufacturer's name, address and relevant Technical Literature/Brochures with warranty Terms and EMD.
- g) If the bid is for branded makes, authorization letter from principals clearly indicating that the vendor is the competent authority to sell and provide services towards the items mentioned in the scope of supply given in this tender document.
- h) Copy of LST/CST/WCT No. PAN No. and TIN No. allotted by the concerned authorities.
- i) List of deliverables / Bill of materials and services.
- j) Compliance sheet with any deviation with reference to the terms and specifications.
- k) Indicate the names of the Indian reputed Organizations where you have supplied similar equipment and may attach the satisfactory performance report of the equipment from user Organization.
- l) The item should be supplied with manuals and the manuals including technical drawings should be complete in all respects to operate the system without any problem.
- m) Bid documents should be submitted as per the above sequence with Index page and page numbers (including technical literature). Each page of the bid should be signed & stamped in original. Unsigned bids will not be considered for evaluation.

• **Envelope 2: "Commercial Bid" shall contain:**

- a) Price schedule complete in all respects with proper seal and signature of authorized person. **Tender with any condition including conditional rebate shall be rejected forthwith.**
- b) Cost of all the items should be mentioned clearly and individually in the Commercial Offer (Part-II) only.
- c) **The Bidders are requested to quote for Educational/Institutional Price for Machine/ Equipment and, since we are eligible for the same.**
- d) **Printed conditions of the vendor submitted with the tender will not be binding on NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH.**

**7. Date of opening the Technical Bids.**

Technical Bids will be opened on – **21st Feb,2017 at 02.30 P.M** at office of the Stores & Purchase Officer, National Institute of Science Education & Research, Jatni.

The Technical bids will be opened in the presence of the bidders on the specified time and date. Bidders/Agents who have responded to the tender only will be allowed to be present.

The technical bids will be evaluated to shortlist the eligible bidders. The commercial bids of only the short listed bidders shall be considered for further processing. Bidders whose technical offer is found acceptable and meeting the eligibility requirements as specified in this tender will be informed about the date and time of the opening of the commercial bid.

- Note:**
- (1) Please do not insert "Commercial Bid" (prices quoted) in the technical bid envelope. If the price quoted is submitted with technical bid the tender will be rejected.
  - (2) No camera mobiles / mobiles are allowed during tender opening.

## **8. Opening of Commercial Bids**

NISER will open commercial bids of only the short listed bidders, in the presence of the bidders or their authorized representatives who choose to attend the commercial bid opening. The Date and Time of opening the Commercial Bid will be intimated only to pre-qualified and technically acceptable Bidders for the item at a later date.

The representatives of short listed firms only will be allowed for commercial bid opening.

ONLY TECHNICALLY accepted competitive bids will be considered for placing Purchase Order. The commercial offers of the vendors whose technical offers are found to be technically deficient or do not meet the qualification criteria as specified in this tender will be returned to them without opening.

The bid can be submitted in person or through post/courier (NISER will not be responsible for delayed / late quotations submitted / sent by Post / Courier etc. resulting in disqualification/rejection of any bid) so as to reach NISER on or before the due date and time. Fax / E-mail / Telegraphic / Telex tenders will not be considered unless it is asked for. The bidders 'authorized representative can attend the bid opening.

## **9. The Director NISER reserves the right to accept the offer in full or in parts or reject summarily or partly.**

## **10. Delivery Period / Timeliness**

The deliveries, installation must be completed within 45 days, after placement of purchase order. The time is the essence of the contract. It is mandatory for the bidders who respond to this bid to meet these expectations, as they are tightly linked to NISER's plans of completing the project within the time frame.

## **11. Locations for the Supply / Services**

The Laboratory Equipments covered by this document is required to be supplied and Installed at School of Physical Sciences of NISER, Jatni. Tender has to give under taking that **he will delivered & install the equipment supplied by him at our new campus at Jatni free of cost.**

## **12. Order Placement and Release of Payment**

The Purchase Order and payment shall be processed by –

**Stores & Purchase Officer  
National Institute of Science Education & Research,  
Jatni Campus, P.O. – Bhimpur-Padanpur, Via-Jatni,  
Khurda – 752050, Odisha, INDIA**

Payment for the items to be supplied by the vendor against the purchase order shall be made by National Institute of Science Education & Research as follows:-

80% payment will be made after 100% delivery of the material on submission of original invoice and original delivery challans duly signed and stamped by the authorised representative of NISER along with performance Bank Guarantee.

Balance 20% payment will be released on submission of installation and warranty certificate duly signed and stamped by the authorized representative of the user department.

In case of imports 100% payment will be made through Letter of Credit. 80% will be paid after submission original shipping documents & balance 20% will be released after satisfactory installation and commissioning along with submission of performance Bank Guarantee.

**Agency Commission: Agency Commission to be paid to India Agent should be specified separately and same will be paid in INR.**

**The tenderers who are not agreeing to above payment terms are requested not to submit their tender otherwise their EMD will be forfeited.**

13. **NISER** will not provide any accommodation/transportation for the engineers/ representatives for attending installation, commissioning and demonstration work. It is the absolute responsibility of the Principal Supplier/Indian Agent to make their own arrangements.
14. **The successful bidder**, on award of contract / order, must send the contract / order acceptance in writing, within 7 days of award of contract / order failing which the EMD will be forfeited.

**15 Period of validity of bids**

Bids shall be valid for a period of 90 days from the date of opening the Technical bid.

NISER may ask for the bidder's consent to extend the period of validity. Such request and the response shall be made in writing only. The bidder is free not to accept such request without forfeiting the EMD. A bidder agreeing to the request for extension will not be permitted to modify his bid.

Bid evaluation will be based on the bid prices without taking into consideration the above corrections.

**16. AWARD OF CONTRACT**

NISER shall award the contract to the eligible bidder whose bid has been determined as the lowest evaluated commercial bid. If more than one bidder happens to quote the same lowest price, NISER reserves the right to award the contract to more than one bidder or any bidder.

**Purchaser's Right to vary Quantities at the time of Award:** NISER reserves the right at the time of award of Contract to increase or decrease the quantity of items specified in the Schedule of Requirements without any change in price or other terms and conditions.

**17. Corrupt or Fraudulent Practices**

NISER requires that the bidders who wish to bid for this project have highest standards of ethics. NISER will reject a bid if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices while competing for this contract. NISER may declare a vendor ineligible, either indefinitely or for a stated duration, to be awarded a contract if it at any time determines that the vendor has engaged in corrupt and fraudulent practices during the execution of contract.

## **18. Interpretation of the clauses in the Tender Document / Contract Document**

In case of any ambiguity / dispute in the interpretation of any of the clauses in this Tender Document, Director, NISER's interpretation of the clauses shall be final and binding on all parties.

## **19. Price**

The price quoted shall be considered firm and no price escalation will be permitted at any time. The quotation should be in Indian Rupees or any known foreign currency. Packing, forwarding, freight, insurance, **Agency commission** and commissioning charges, if any extra may be quoted separately in Commercial Bid.

In case of INR bids the price criteria should be on F.O.R., NISER, Jatni. Govt. Levies like central excise duty, sales tax, octroi, WCT etc., if any, shall be paid at actual rates applicable on the date of delivery. Rates should be quoted accordingly giving the basic price, Central Excise Duty, VAT/ Central Sales Tax etc., if any. Please note that NISER is exempted from payment of Excise duty vide Govt. Notification No.10/97-Central Excise dated 1st March, 1997.

Please provide TIN no. of the firm along with the CST/WCT No. allotted by the concerned authorities in your quotation.

In case of Foreign Currency bid: - Price criteria should be FOB nearest airport detail break up of Price, FCA cost, **Agency Commission**, Insurance, Freight up to Kolkata Airport is required.

## **20. Pre-installation:**

Pre-installation facilities required for installation may please be intimated in the technical bid. Subsequently, before the consignment lands in NISER, Jatni the bidder shall confirm that the pre-installation requirements are sufficient for installation of the equipments. In other words the bidder should continuously monitor the pre-installation requirements and see that everything is ready before the consignment is taken to the site for installation.

## **21. Installation, Warranty & Support**

Bidder shall be responsible for installation / demonstration wherever applicable and for after sales service during the warranty and thereafter.

The items covered by the schedule of requirement shall carry minimum three years comprehensive warranty from the date of acceptance of the equipments by NISER. Warranty shall include free maintenance of the whole equipment supplied including free replacement of parts. The defects, if any, shall be attended to on immediate basis but in no case any defect should prolong for more than 24 hours. The comprehensive warranty includes onsite warranty with parts.

The defects, if any, during the guarantee/warranty period are to be rectified free of charge by arranging free replacement wherever necessary. This includes cost, insurance, freight, custom duty, octroi, local taxes if any should be borne by the beneficiary or his agent. A clear confirmation should be given for this item.

The bidder shall assure the supply of spare parts after warranty is over for maintenance of the equipment supplied if and when required for a period of 10 years from the date of supply of equipment on payment on approved price list basis.

The equipment must be supported by a Service Centre manned by the principal vendor's technical support engineers. The support through this Centre must be available 24 hours in a day, seven days a week and 365 days a year. Also it should be possible to contract the Principal's vendor support Centre on a toll free number/web/mail.

The vendor will have to arrange for all the testing equipment & tools required for installation, testing & maintenance etc.

## **22. Indemnity**

The vendor shall indemnify, protect and save NISER against all claims, losses, costs, damages, expenses, action suits and other proceeding, resulting from infringement of any law pertaining to patent, trademarks, copyrights etc. or such other statutory infringements in respect of all the equipment's supplied by him.

The successful will be fully responsible for payment of wages and other dues as prescribed and compliance of various Labour Laws.

The successful tender should give an undertaking that the staff deployed at the centre in terms of this contract at all time will be employees of the agency exclusively and they shall not be entitled to any claim of employment or permanency of job with NISER.

NISER reserves the right to forfeit whole or part of the security money towards any damage/lose caused due to the negligence on the part of the agency engaged.

## **23. Insurance**

The equipment's to be supplied will be insured by the vendor against all risks of loss or damage from the date of shipment till such time it is delivered at NISER site in case of Rupee/Foreign currency transaction.

## **24. Penalty for delayed Services / LD**

As time is the essence of the contract, Delivery period mentioned in the Purchase Order should be strictly adhered to. Otherwise the bidder will forfeit EMD/SD and also LD clause will be applicable /enforced.

If the supplier fails to Supply, Install and Commission the equipment as per specifications mentioned in the order within the due date, the Supplier is liable to pay liquidated damages of 1% of order value per every week of delay subject to a maximum of 10% beyond the due date. Such money will be deducted from any amount due or which may become due to the supplier.

NISER reserves the right to cancel the order in case the delay is more than 30 days Penalties, if any, will be deducted from the EMD.

**25. Jurisdiction**

If a dispute arises out of or in connection with the contract, or in respect of any defined legal relationship associated therewith or derived therefrom, the parties agree to submit that dispute to arbitration under the ICADR Arbitration Rules, 1996.

The authority to appoint the arbitrator(S) shall be the International Centre for alternative dispute resolution.

The International Centre for Alternative Dispute Resolution will provide administrative services in accordance with the ICADR arbitration Rules, 1996.

**Stores & Purchase Officer  
NISER, Jatni**

**DECLARATION BY THE VENDOR**

It is hereby declared that I/We the undersigned, have read and examined all the terms and conditions etc. of the tender document for which I/We have signed and submitted the tender under proper lawful Power of Attorney. It is also certified that all the terms and conditions of the tender document are fully acceptable to me/us and I/We will abide by the conditions from serial no. 1 to 25 and we have not given any printed conditions beyond the scope of this tender. This is also certified that I/We/our principal manufacturing firm have no objection in signing the purchase contract if the opportunity for the supply of the items against this tender is given to me/us.

Date:

Signature:

Address:

Name:

Designation:

On behalf of:

(Company Seal)





**PART - 1**  
**FOR SUPPLY AND INSTALLATION OF**  
***TEM SAMPLE PREPARATION UNIT***  
**FOR**  
**NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, JATNI**  
**General Information**

1.	Name of the Company	
2.	Full address of company alongwith Telephone no. Fax no. E-mail address :	
3.	Local address of company for communication, if any	
4.	Are you a manufacturer or dealer/reseller	
5.( a)	Annual turn over in last 3 financial years in Rs. Crores. (i) Year 2013-2014 (ii) Year 2014-2015 (iii) Year 2015-2016	
5.( b)	<b>Supply &amp; Installation of <i>TEM</i> <i>SAMPLE PREPARATION UNIT</i></b> <b>equivalent to our tendered OF</b> <b>last 3 financial years in State</b> <b>Government or Govt. of India</b> <b>Department(s) /Reputed</b> <b>Organisation(s) (in Nos. and</b> <b>Value)</b> <b>(Please attach list of clients)</b> (i) Year 2013-2014 (ii) Year 2014-2015 (iii) Year 2015-2016	
5.( c)	Trade Tax / Sales Tax Registration no. with Place	
5.( d)	Income Tax Registration no. with place	



**SUPPLY AND INSTALLATION  
OF  
TEM SAMPLE PREPARATION UNIT  
FOR  
NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, JATNI  
TECHNICAL SPECIFICATION**

<b>S. No.</b>	<b>Item Specification</b>	<b>Offered specification with Make &amp; Model No. please specify any deviation if any. Please attach separate sheet if required</b>
(1)	(2)	(3)
<b>01</b>	<b><i>TEM SAMPLE PREPARATION UNIT (NC-000813-12-R&amp;D-NIS-5.10-0100-16-17)</i></b>	
	Please find the detailed specification of " <b><i>TEM SAMPLE PREPARATION UNIT</i></b> "  attached in <b>Annexure-I</b>	

**Note: - Parties must mention make & model no. of the equipment offered by them, with detailed specification (on separate sheet) & deviation if any. Otherwise their tender will not be accepted.**

**TECHNICAL SPECIFICATIONS**

**Part--A: Specimen Preparation Equipments for TEM/STEM Analysis**

**I. Name and Quantity Required**

Name: Specimen Preparation Equipments for TEM/STEM Analysis

**II. Scope of Supply:**

Supply, installation, commissioning, performance demonstration and training for the sample preparation units for TEM/STEM Analysis.

**1. Ion Beam Milling System**

The following minimum or better specifications have to be satisfied.

**Product Safety**

- x The system shall have CE Certification

**Dual Ion Source Guns**

- x The system should have two ion guns that can be run independently
- x The voltage range of the guns should be from 100 to 6000 volts
- x The current range should be variable from 0 to 100 micro Amps
- x The ion guns should be set at an angle of 90 degrees or greater to each other
- x The guns shall be aligned manually with set screws in two directions
- x Specimen or Beam modulation shall be adjustable
- x The guns shall require no parts exchange within operation of a minimum of 5000 hrs. milling time
- x The ion current density at the source should be  $\geq 10 \text{ mA/cm}^2$

**Optical Microscope**

- x A Stereo Microscope shall be available for sample viewing
- x Reflected and transmission light should be available

**Sample Holders**

- x Sample Holders should include clamp type holder for both side polishing

**Vacuum Airlock**

- x Sample exchange shall be through an Air Lock and be completed in less than 60 seconds
- x Sample shall be viewable in both the upper and lower position of the chamber

**Main Chamber**

- x Specimens in the chamber during milling can be rotated in a counter clock wise direction at speeds from 0 to 6 rpm.
- x The rotation speed should be controllable manually with a knob or software on the front of the instruments
- x Suring Sector milling only one gun shall be milling during each sector and the gun shall have an on/off display showing the gun is milling.
- x An Optional Cold Stage and controller should be available.

- x Cold stage, for heat sensitive samples, operating down to a temperature  $\leq -160$  Deg C with electronic temperature measurement.

#### **Gas Control System**

- x The gas flow for each gun shall be independent
- x The gas flow and therefore the current shall be set manually with a knob and the current measured during this process.

#### **Pumping System**

- x Pumping should be based on appropriate turbo pump with an oil free backing pump to give a vacuum of  $\leq 6 \times 10^{-6}$  Torr as base pressure and  $\leq 9 \times 10^{-5}$  Torr as operating pressure; Vacuum Gauge should be present in the chamber area to read the vacuum in the specimen preparation area. Fast cooling and warm up times, typically  $\leq 15$  minutes.

#### **Reliability and Maturity**

- x The manufacturer should have been commercially producing Ion mill for more than 5 years and have a large (>100 systems) installed base to insure parts and knowledge set available for support of the system power.
- x The power for the system shall not exceed 700 watts at startup

#### **User References with Service Support**

- x **The supplier should provide user references alongwith list of service engineers of all over India** More the number of user references & more no of service engineer better it would be.

### **2. Ultrasonic Disc Cutter**

- x Circular cutting tool 3 mm, 2.3 mm diameter
- x Rectangular cutting tools min. 2mm X 3mm and/or bigger
- x Optical Microscope is a must
- x Variable cutting frequency
- x Depth of cut display indicator
- x Spring loaded sample stage with x-y motion
- x Consumables

### **3. Disc Punch**

- x For 3 mm dia circular samples
- x Preferable user independent, horizontal/vertical cutting action

### **4. Disc Grinder - Manual with Micro-meter Controlled Lead Screw**

- x Manual operation for 3 mm dia specimens
- x Specimen lapping kit with at least 3 glass lapping plates and 100 lapping discs
- x Disc mount with goniometer with at least 50 micron or less graduation on the scale
- x All required consumables

### **5. Dimple Grinder**

- x Suitable for 3 mm diameter samples
- x Dimpling depth down to 10 microns or less
- x Automatic termination of the process
- x Digital/ Analog Micrometer to indicate depth

- x All required consumables including copper and SS wheels
- x An optical microscope is a must.

**6. Hot Plate for Specimen Mounting**

- x With thermostatic control of temperature and suitable sample mount holders

**7. Low Speed Diamond Wheel Saw along with appropriate cutting wheels suitable for Metals, composites & ceramic materials**

- x ~65 mm dia and 42 mm dia flanges
- x CUT-OFF WHEELS FOR HARD AND BRITTLE MATERIALS
- x Cutting wheels – ~125 mm dia X 0.4 mm X 12.7 mm
- x Cooling fluid and other accessories
- x All required consumables & sample holders
- x 240V, 50 Hz Operation

**8. Twin Jet Polisher for Tem Sample Preparation of Metallic Samples**

The automatic electrolyte jet thinning equipment should be able to prepare a perforated specimen of 3mm diameter for TEM from a sample thickness of about 0.5mm to a thickness of less than 50nm. The thinning unit should consist of a control unit, polishing unit. The detailed specifications of each of these units are given below:

**Control Unit**

A separate control unit should be provided incorporating power supply, programming and monitoring functions. It should have the following features:

- x Should have an adapter to connect to the polishing unit.
- x Mains voltage should be single phase, 220--240 V, 50Hz.
- x Output voltage should be in the range 0--120V DC.
- x Digital display of required parameters like current, electrolyte temperature and elapsed thinning time.
- x A database or manual to accommodate up to 200 user methods of electrolytic thinning for different materials.
- x Automatic or manual stopping of the polishing process if the temperature of the electrolyte exceeds the predetermined temperature.

**Polishing Unit**

The polishing unit should be compatible to the control unit and the specimen should be polished from both sides simultaneously, so that the structure is available with minimum deformation. The polishing unit should have the following features:

- x Should have a specimen holder for 3mm diameter and 0.5 mm thick specimens where one part of the holder should carry a platinum conductor so that electrical connection to the polishing circuit is automatically established.
- x Should have set of jets of 1mm diameter for thinning 3mm diameter specimens.
- x Infrared detector to stop the thinning process automatically once the perforation appears.
- x All the parts, which would be in contact with chemicals, should be made of corrosion-resistant material.

**9. Single Disc Motorised Grinding/Polishing Machine With Complete Accessories**

The specifications should be as follows:

- x Touch pad controls with LCD Display
- x Motor Power minimum 190W /0.5HP
- x Platen Diameter – 8"/200mm
- x Variable speed from 10 – 300 RPM or wider range
- x 240V, 50 Hz Operation

**10. Complete Kit For Preparing Samples For Cross--Sectional Tem**

- x List out all the parts included in the kit
- x Offer additional spares for at least 5 years operation.

**11. Precision Vertical Diamond Wire Saw For Cutting Metals, Semiconductor, Ceramic, Glass, Plastic & Composites Materials**

- x Smooth, sharp--edged cut surfaces
- x Vertical arrangement of the wire
- x Linear feed (60 mm or more)
- x Variable wire speed
- x Automatic shut--down of the saw upon termination of cutting or in the event of wire breakage
- x Equipment for operation with cutting fluids
- x Easy servicing and largely maintenance free
- x The specimen holder should be situated inside the wire loop such that it can serve as a reference while the specimen can be turned
- x 240V, 50 Hz Operation

**12. Plasma Cleaning System for TEM Samples (optional)**

**The Equipment: Advanced Plasma Cleaning System**

The plasma cleaning system should be advanced one for use to enhance both imaging and microanalysis by removing organic (carbonaceous) contamination from TEM/SEM specimens, specimen holders, grids, and bulk objects.

**Product Safety:**

- x The system shall have FCC compliant as well as CE Certification

**Plasma Source:**

- x The system shall have a low energy glow discharge ion source creating hydrogen and oxygen radicals.
- X Cleans highly contaminated specimens in 2 minutes or less. Cleaning time information must be mentioned in brochure or in official website.
- x Flow rate is factory set and can be adjusted via a potentiometer located on the service panel
- x The RF Plasma Source shall be CE Certified

**Chamber & Sample Holder Port:**

- x At least two ports shall be available to accept all side entry TEM holders with most of the varieties.
- x Quartz and stainless steel chamber specifically designed for TEM and SEM specimen/holder processing
- x Chamber lid provides access for bulk objects at least 3.5" or more.
- x The chamber contains a load lock for rapid throughput applications

- x Pump down time is less than 50 seconds & venting time less than 5 seconds.
- x Viewport provided for chamber observation
- x The chamber contains a load lock for rapid throughput applications
- x Specimen interface allows for rapid holder insertion requiring no tools or external clamps
- x Specimen Holder Ports should be compatible with most TEM specimen holders
- x Specimen Holder Ports should be secured to the main housing by a bayonet-- style mount to facilitate interchangeability without the need for tools

**Vacuum System:**

- x Must be an oil--free vacuum system consisting of a turbomolecular drag pump backed by a multi--stage diaphragm pump for contamination--free processing
- x The pumping system shall pump down the system in less than two minute
- x Vacuum must be sensed by a Pirani Gauge
- x Must attain the vacuum level around  $5 \times 10^{-6}$  mbar.

**Main Chamber:**

- x The chamber shall have two airlock ports to support all side entry TEM goniometers
- x A large entry port shall also be available for SEM holders, samples and other irregular shaped pieces.

**Gas Control System:**

- x Gas flow controller shall be used
- x The system shall support a minimum of two gases these should include either or Argon, Hydrogen and Oxygen.
- x The gas flow should be controlled by embedded Mass Flow Controllers (MFC)
- x Should be capable of cleaning with minimal plasma damage.
- x Should be capable to clean holey carbon grids without damaging them. Data supporting this should be included along with the offer.
- x The system venting sequence is independently interlocked

**Power Source:**

- x High Frequency 13.50 MHz frequency; 80W forward power
- x HF power control output is optimized with an automatic matching network. No user intervention required.
- x The HF electrode must consist of a copper antenna located outside of plasma chamber in order to eliminate the possibility of electrode material sputtering onto the specimen
- x Inductively coupled downstream plasma resulting in 10 eV – 12 eV ion energies

**Electronics / Controls:**

- x The operation can be either in TEM or custom mode
- x TEM mode is fully automated for optimal processing conditions with the only variable being time where as the custom mode allows the establishment of process time, plasma power, vacuum level, gas mixing selection, ratios and flow rate
- x Recipe storage and recall capabilities should be standard
- x The system can be accessed via the Internet for remote diagnostic purposes
- x Help menu available within the control module as standard with details

- x The termination program is fully automatic available with the system
- x The processing time is controlled/displayed through the Touchscreen display
- x Safety interlocks should consist of the enclosure panels, HF, gas, and vacuum to prevent operation without the existence of appropriate processing conditions

**User Interface:**

- x The User Interface shall be a seven inch or larger touch screen. The programming can be done through this embedded module with customizing the parameters.
- x Operation in either TEM or custom mode. The TEM mode is fully automated for optimal processing conditions with the only variable being time
- x The system shall have two USB ports, Recipes shall be available using mixtures of the three gases.
- x The touch screen shall be configured to display multiple languages
- x Custom mode allows the establishment of process time, plasma power, vacuum level, gas mixing selection, ratios and flow rate, Recipe storage and recall capabilities
- x Can be accessed via the Internet for remote diagnostic purposes
- x Help menu available within the control module
- x Termination is fully automatic
- x Processing time is controlled/displayed through the touch screen

**Reliability and Maturity:**

- x The exact model number shall have been commercially available for a minimum of five years and have a large installed base to insure parts and knowledge set available for support of the system, Should provide at least 3 user references in India.

**Power Requirements:**

- x The system should work in 220VAC, 50Hz power standard.

**13. Gold--Carbon Sputter Coating System (optional)**

The sputter coating unit must be a state--of--the--art, easy to use, versatile, compact (must be table--top size) turbo molecular pump based (backed by rotary pump) coating system absolutely suitable for field emission gun scanning electron microscopy specimen preparation and other coating applications. Please note all the below--mentioned technical specifications must be supported by original technical brochure / datasheet / documents as well as available in the manufacturer's official website.

The sputter coating unit should be compact and unequalled versatile, must be supplied with combined metal sputtering unit (must be capable of using various noble metal targets) as well as carbon materials (should use both carbon rod & fibre) evaporation inserts – these should be on--site swappable easily and capability automatically detects the type of coating insert fitted. The sputtering coating unit should have glow discharge option (for future upgradation) to allow modification of specimen surface properties.

The sputter coating unit should have technical features as given below:

- x The unit must be capable of combining the coating unit with noble metals sputtering as well as carbon coating – all in one unit and makes it space saving as well as cost--cutting design



which is required in the laboratories and these must be field swappable easily. Please quote glow discharge unit separately in the option.

x The system must be turbo pump based backed by rotary pump. The system should have pre-programmed automatic vacuum control suitable for process and material.

- Should allow sputtering of a range of non-oxidizing /noble metals such as gold (Au), platinum (Pt) and palladium (Pd).
- Should allow Carbon coating using Carbon rods & fibre using advanced designed carbon evaporation gun.
- Should have capability of multiple, customer-defined coating schedules can be stored.
- Should have capability for glow discharge option for modification of specimen surface properties for future upgradation.
- Should have fully automatic touch screen control in the system including rapid data input, simple operation etc.
- The system should have rotating stage design with 50mm dia for accommodating large samples
- The data should be rapidly entered during parameter settings using fully automatic touch screen control display.
- The data can be pre-set and can be stored at the touch of a button on the display.

Essential specifications of various parameters:

**Vacuum:**

Using oil-free turbo molecular pump backed by rotary pump. Internally-mounted, 70L/s air-cooled turbo molecular pump and 50L/m two-stage rotary pump with oil mist filter.

- x The vacuum measurement must be by Pirani gauge.
- x The typical ultimate vacuum should be  $5 \times 10^{-5}$  mbar with sputter vacuum range between  $5 \times 10^{-3}$  and  $5 \times 10^{-1}$  mbar

**Specimen Stage:**

- x Should have 50 mm diameter rotation stage. Must have adjustable tilting facility up to 90° angle.
- x Rotation speed 8-20 RPM.

**Sputtering Process:**

- x With 0 – 150mA to a pre-determined thickness using either film thickness monitor or by the built-in timer.
- x The maximum sputtering time is 60 minutes without breaking vacuum.
- x The sputtering process should be monitored with a quartz crystal for accurate measurements

**Carbon Evaporation Process:**

- x Current pulse: 1-90A or better
- x Should ensure the reproducible carbon evaporation from rod or fibre sources using a robust; ripple free DC power supply used for pulse evaporation.

**Metal targets needed, please quote additional target separately as optional:**

x Gold (Au): 57mm diameter & 0.1 mm thick – 1 no.

**Carbon materials needed, please quote additional target separately as optional: x**

Carbon fibre cord – 1m

x Carbon rods 3mm diameter & 100mm long, unshaped – 10 nos with suitable carbon rod shaper

The manufacturer should have at least 10 nos. of installations of sputter coater in India.

**General Terms & Conditions**

1. The suppliers shall quote the price of each and every component individually.
2. The supplier shall erect & commission sample preparation instruments in our laboratory, demonstrate the performance of the main equipment.
3. Proprietary item, if any, should be certified and signed by the principal manufacturer in original.
4. The Indian Agents should have service facility at India. He should have minimum 5 trained & qualified engineers to service the model being offered. Details of their qualification, experience & place of posting are to be submitted.
5. All accessories shall be guaranteed for satisfactory performance for a period of 12 months from the date of commissioning and handing over.
6. Offer should be valid for 90 days from the date of opening of technical bid. 7. Price should be CIF Kolkata.
8. Complete pre installation requirement should be provided along with Bid.

## PART-2



**FINANCIAL BID  
FOR SUPPLY AND INSTALLATION  
OF  
TEM SAMPLE PREPARATION UNIT  
FOR  
NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH,  
JATNI**

Sl. No.	Systems	Approx. Qty.	Unit Price FOB in Foreign currency	Unit Price including all taxes, freight, Insurance, entry tax (delivered at NISER, Jatni) service charges, installation and warranty charges in INR
(1)	(2)	(3)	(4)	(5)
<b>01</b>	<b>TEM SAMPLE PREPARATION UNIT</b>	<b>01 Nos</b>		
<b>2.</b>	<b>Above item should carry three years onsite comprehensive warranty . In case the tendered provide warranty less than 03 years then bidders has to give justification for lesser period of warranty. Without justification tender submitted is liable to be rejected.</b>			
<b>3.</b>	Agency Commission to be paid to Indian Agent (will be paid in INR only after successful installation)	Included/Excluded _____ . _____ % of basic price		
<b>5</b>	CIP Kolkata Charges	Amount		
<b>6</b>	Excise Duty Included/Excluded in the quoted price	_____ . _____ % of basic price (Excise duty exemption certificate will be issued)		
<b>7</b>	Custom Duty Included/Excluded in quoted price	_____ . _____ % of basic price (Custom Duty exemption certificate will be issued)		
<b>9</b>	Any other charges Included/Excluded in the quoted price (i) Trade tax/Sales tax (Institute will not issue any Sales Tax concession form) (ii) Any other levies	_____ . _____ % of (basic price + excise duty)  _____ . _____ %		
<b>10</b>	AMC Charges after expiry of warranty	Amount in INR		

**ALL ABOVE ITEMS ON 3 YEARS ONSITE FULL COMPREHENSIVE FREE WARRANTY.**

Date:

Address:

(Company Seal)

Signature:

Name:

Designation: On behalf of:

(Please take the printout on your letter head along with all details)

**To,**  
The Finance Officer  
NISER, Jatni Campus  
P.O. – Jatni, Khurda - 752050  
Odisha, INDIA

Ref: Tender Ref. No.: \_\_\_\_\_ Dated. \_\_\_\_\_

Sub: Refund of EMD

Dear Sir,  
We have deposited EMD of Rs. \_\_\_\_\_/- vide D/D No. \_\_\_\_\_ dated.  
\_\_\_\_\_ of \_\_\_\_\_ **(Name of Bank)** against  
above mentioned tender. Since our tender has not being qualified, we request to release our  
EMD.

Yours faithfully,

Signature of the Authorised Signatory  
(with company seal)

Our addressed is verified as below:

M/s. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Pin Code: \_\_\_\_\_

Phone No.: \_\_\_\_\_



**NATIONAL INSTITUTE OF SCIENCE EDUCATION & RESEARCH**  
**JATNI CAMPUS, P.O. – BHIMPUR-PADANPUR, VIA-JATNI**  
**KHURDA – 752050, ODISHA, INDIA**  
**Tender Notice No.NIT-08/2017**

**CHECK LIST**

Your bid should accompany with following documents. Please enclose the required document and put (√) mark in the check list where ever applicable.

<b>Sl. No.</b>	<b>Description of Documents</b>	<b>Enclosure</b>
1.	EMD to be attached with Technical bid only	Yes / No
2.	Part I of Tender Documents with Declaration by the Vendor	Yes / No
3.	Duly filled EMD refundable sheet (if EMD is there)	Yes / No
4.	General Information Sheet	
	Annual turnover in last 3 financial years in Rs. Crores (i) Year 2011-2012 (ii) Year 2012-2013 (iii) Year 2013-2014	Yes / No
	Supply & Installation of equivalent to our tendered for the required item from last 3 financial years in State Government or Govt. of India Department(s) /Reputed Organisation(s) (in Nos. and Value) (Please attach list of clients) (i) Year 2011-2012 (ii) Year 2012-2013 (iii) Year 2013-2014	Yes / No
	Trade Tax / Sales Tax Registration no. with Place	Yes / No
	Income Tax Registration no. with place	Yes / No
5.	Detailed technical description of the item	Yes / No
6.	Detailed filled Financial Bid	Yes / No
7.	Authorisation letter in letter head duly signed by the authorised signatory for allowing your representative to attend the tender opening meeting.	Yes / No

Signature of the Authorised Signatory with Date  
(with Company Seal)