

**INDIAN INSTITUTE OF TECHNOLOGY  
(INDIAN SCHOOL OF MINES), DHANBAD**



Notice Inviting Tender (NIT) in Two-Bid System  
for  
**Supply and Installation of Sample Preparation Unit for High  
Resolution Transmission Electron Microscope (HRTEM).**

Tender No.:**CRF-INS-308-19-20**

Date:1 January 2020

**Bid Submission deadline: 22.01.2020, 1:00 P.M.**

**REGISTRAR**

**Indian Institute of Technology (Indian School of Mines), Dhanbad**

**P.O. – Indian School of Mines (I.S.M.)**

**DHANBAD –826004 (INDIA)**

**[www.iitism.ac.in](http://www.iitism.ac.in), [purchase@iitism.ac.in](mailto:purchase@iitism.ac.in)**

**GSTIN : 20AAAAI0686D1ZA**

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## **CHAPTER 1**

### **Instructions to Bidders**

IIT (ISM), Dhanbad was formerly known as Indian School of Mines (ISM) and was a Deemed University before it got converted into an Institute of National Importance under the Institutes of Technology (Amendment) Act, 2016 passed by the Parliament of India and got the assent of President of India. The Indian School of Mines, now IIT (ISM), Dhanbad, was formally opened on 9th December 1926, by Lord Irwin, the then Viceroy of India to address the need for trained manpower related to mining activities in the country with disciplines of Mining and Applied Geology. In 1967, it was granted the status of a deemed to be university under Section 3 of UGC Act, 1956 and it was renamed as Indian Institute of Technology (Indian School of Mines) in 2016. It started as an institution to impart mining education, and today, has grown into a technical institution with various academic departments. IIT(ISM) is located in the mineral-rich region of India, in the city of Dhanbad in the state of Jharkhand. It is the third oldest institute [after IIT Roorkee and IIT (BHU) Varanasi] which got converted into an IIT.

IIT (ISM), Dhanbad intends to procure the equipment "Sample Preparation Unit for High Resolution Transmission Electron Microscope (HRTEM)" to enrich its teaching and research facility at Dhanbad.

Reputed manufactures or authorized distributors are invited to submit their bid for "Sample Preparation Unit for High Resolution Transmission Electron Microscope (HRTEM)" for IIT (ISM), Dhanbad as per this tender document in a Two-Bid System: - (a) Techno-Commercial (also termed as technical bid) bid (Part-1) consisting of all technical details of the item along with commercial terms and conditions, EMD and (b) Price bid (Part-2) indicating price for their items mentioned in the technical bid. All instructions and terms and conditions must be followed, failing which bid(s) will liable to be rejected.

### **INSTRUCTIONS**

1. Offer should be submitted under TWO-BID system in two separate sealed covers i.e. "Techno-commercial bid" and "Price bid".
2. Tender Number and tender submission deadline must be clearly mentioned on the top of the envelope.
3. **a) In a tender, either the Indian agent on behalf of the principle/ OEM and the Principle/OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender.**  
**b) If an agent submit bid on behalf of the principle/ OEM, the same agent shall not submit a bid on behalf of another principle/ OEM in the same tender for the same item/product.**

4. Bidder(s) must submit PAN given by Income Tax authorities, TIN and copy of PAN / TIN with the bid.
5. The offer must be submitted in **Two-Bid** in the office of **Assistant Registrar (Purchase & Stores), IIT (ISM), Dhanbad– 826004 (Jharkhand, India)** only. Please send your offer by Regd.Post/ Speed Post/ Courier along with Courier receipt. Tender/ quotation will be received during IIT (ISM) Dhanbad working hours only (i.e. Monday to Friday). At any circumstances by hand delivery is not acceptable. Late or delayed tenders shall be summarily rejected. Bids sent through Email/Fax or submitted in unsealed cover(s) will not be accepted and such bids will be treated as non-responsive bids.
6. Bid(s) must be sent sufficiently in advance so that it reaches the institute on or before the submission deadline. Bid(s) received after the submission deadline will not be considered.
7. Bid document(s) and all enclosures must contain the signature and seal of the authorised representative of the bidder.
8. The bidder quoting for item(s) as per this tender should be the registered to provide the item/services with the appropriate government authority. Copy of registration certificate should be enclosed with the tenders (part-1). Offers submitted without proper registration certificate shall be rejected summarily.
9. The bidder quoting for item(s) as per this tender should be the registered to provide the item/services with the appropriate government authority. Copy of registration certificate should be enclosed with the tenders (part-1). Offers submitted without proper registration certificate shall be rejected summarily.
10. The Bank/RTGS detail on the letter-head of the bidder(s) must be submitted along with the tenders (part-1). A copy of the cancelled cheque may also be attached.
11. Name and PAN/Voter Card No. /Aadhar No. of the authorized signatory of the bidder(s) must be mentioned in the Form 6.2.
12. A copy of PAN/Voter Card/Aadhar Card of the authorized signatory of the bidder(s) must be attached with the Form 6.2

## CHAPTER 2

### Terms and Conditions

**The offer must comprise of the following, failing which it will be treated as non-responsive bid hence will be rejected:**

1. The bids under Two-Bid System will consist of two parts as per following details:- **a) Techno-Commercial bid (Part 1)** consisting of all technical details along with Commercial terms and conditions and EMD (Earnest Money Deposit), in the form of Demand Draft issued from any Nationalized / Scheduled commercial bank in favour of “Registrar, IIT (ISM), Dhanbad” and payable at “Dhanbad (Jharkhand, India)”, and **b) Price bid (Part 2)** indicating price for the items / services mentioned in technical bid (part-1). In stage-one, only the Techno-Commercial (Part 1) shall be opened and evaluated. In stage-two, the Price bids (Part 2) of only the technically qualified and acceptable offers will be opened, for further evaluation.
2. Sealing and Marking of Bids:
  - a) The Techno-Commercial bid (Part 1) must be sealed in a separate envelope (ENVELOPE-ONE) with EMD in the form of Demand Drafts, duly super-scribed as “**Techno-Commercial Bid (Part 1), Tender No.:CRF-INS-308-19-20, Submission Deadline: 22.01.2020**” as per following details: -

**EMD: Rs. 3,50,000/- (Rs. Three Lakhs Fifty Thousand only).**
  - b) The Price bid (Part 2) should be sealed in separate envelopes (ENVELOPE-TWO), duly super-scribed as “**Price Bid (Part 2), Tender No.: CRF-INS-308-19-20, Submission Deadline:22.01.2020**”.
  - c) The above TWO separate sealed envelopes are to be put in a bigger envelope (ENVELOPE-THREE), which should also be sealed.
  - d) Each of the above THREE envelopes MUST be super-scribed with “**Bid for Supply and Installation of Sample Preparation Unit for High Resolution Transmission Electron Microscope (HRTEM) Tender No.: CRF-INS-308-19-20, Dated: 1 January 2020, Submission Deadline: 22.01.2020**”.
3. The bids must be neatly typed/computer printed. Hand written offer will be rejected. Bids must carry the numbers of GSTIN/ sales tax / VAT / TIN / PAN / Service Tax Registration No. Bids must be in sealed envelope.
4. All relevant technical specifications/details of offered items, drawings, printed technical leaflets, and commercial details which are necessary to ensure that offer is complete in all respects should be attached with the technical bid documents.
5. A ‘Compliance Statement’ along with a certificate and duly signed that the tenderer satisfies the technical requirements given as per Form 7.5. The said statement should be in a tabular form with the columns: sl. no., (2) technical requirement as per NIT; (3) what is offered by the tenderer; and (4) status of compliance: Complied/Not complied).

6. IIT(ISM) does not bind itself to offer any explanation to those bidders whose Technical Bids have not been found acceptable by the Evaluation Committee of the Institute.
7. Following documents have to be furnished by the bidders with the technical bids (part-1):
- Self attested copies of credentials in support of capability to undertake the supply/work.
  - Technical literature/catalogue with the detail specification of the material
  - Satisfactory performance certificate from their customers for same/similar supply/service must be enclosed along with the technical bid.
  - A copy of this tender document must be signed and sealed on all pages by the bidder(s) accepting the instructions and terms & conditions of the NIT and must be attached with the bid.
8. **Price should be quoted as per annexure I/II:** The comparison between the indigenous and the foreign offers shall be made on FOR destination basis and CIF/CIP basis respectively. However, the CIF/CIP prices quoted by any foreign bidder shall be loaded further as under:
- Towards customs duty, IGST and other statutory levies, custom clearance, inland transportation, currency fluctuation etc. – 15% of the CIF/CIP value.
  - Duties & taxes, if applicable, are to be shown separately clarifying whether those are extra or included in the price. Price bids of only technically qualified tenderers shall be opened in their presence on a pre-notified date and time.
9. Educational discounts, if any, should be mentioned clearly. Justification of the price quoted must be provided with the Price Bid. For this, Price List of the OEM and purchase order of govt. organizations / IITs/ NITs/ CSIR Labs / ISRO labs etc. should be attached. Price bids of only technically qualified tenderers shall be opened in on a pre-notified date and time. Decision of IIT (ISM), Dhanbad in this regard will be final and binding by all the bidders.
10. IIT(ISM), Dhanbad is entitled for Excise Duty Exemption under Govt. of India notifications and is registered with DSIR, Govt. of India for this purpose. This may be taken into consideration while quoting minimum possible rate.
11. Bid Security or Earnest Money Deposit (EMD):- Required Amount for EMD must be submitted in the form of Demand Draft issued from any Nationalized/Scheduled commercial Bank in favour of Registrar, IIT (ISM), Dhanbad payable at Dhanbad with the bid (part-1). Bid received without EMD in part-1 (techno-commercial bid) will be rejected. No interest will be payable by IIT (ISM), Dhanbad on the Earnest Money Deposit. The earnest money of all the unsuccessful bidder(s) will be returned to the respective bidder(s) through bank / RTGS transfer without any interest within 60 (sixty) days only after placing the order / awarding the contract. The Earnest Money of successful bidder(s) shall be returned on receipt of Performance Security (Performance Bank Guarantee / PBG) as mentioned in this tender document. If the successful bidder(s) fails to furnish the performance security or fails to deliver/provide the item/installation/service as per the order's terms and conditions within stipulated period, the earnest money shall be liable to be forfeited. An undertaking to this is to be submitted.
12. **Performance Security or Performance Bank Guarantee (PBG):-** The successful bidder(s), on whom order will be placed, has to submit a performance security of 10% of the total order value at the earliest as per PO terms before release of any payment. Performance security has to be submitted in

the form of Bank Guarantee/Demand Draft/FDR from any Nationalized/Scheduled commercial Bank in favour of the Registrar, IIT (ISM), Dhanbad. Performance security should remain valid for a period of two months beyond the date of completion of all contractual obligations of the successful bidder(s). No interest will be payable by IIT (ISM) Dhanbad on the Performance Security deposited. In case the contractor fails to provide satisfactory service, the Performance Security submitted by the bidder(s) is liable to be forfeited. An undertaking to this is to be submitted.

13. **Validity Period:** - The validity period of the tender should be clearly specified. It must be at least for **240(Two Hundred Forty) days** from opening of bids.
14. **Warranty:** All the active components must carry 5 years comprehensive warranty
15. **Comprehensive Annual maintenance contract (AMC):** The cost of 'annual maintenance contract (AMC)' and "comprehensive maintenance contract (CMC)" should be provided separately for extension of warranty for additional years (which is beyond the normal warranty period mentioned earlier) on yearly basis as an option with the price bid. Offer including terms & conditions should be quoted on per year basis to enable purchaser make AMC for any period from 01 to 05 years, if required.
16. **Liquidated Damage:** As time of the essence for this procurement, hence the ordered materials/work complete in all respects are required to be delivered and installed within the period stipulated in the purchase order failing which liquidated damages of 1% per week for the delayed period subject to maximum of 5% of the total basic value of the order shall be deducted from the invoice of the supplier. Earliest/ expected delivery period should be clearly indicated. Packing should be suitable for 'Air freight'.
17. **Inspection:** Inspection shall be carried out at IIT (ISM), Dhanbad after arrival of the materials and decision of the Institute in this regard shall be final.
18. **Rejection and Replacement:** Rejection, if any, shall be notified to the supplier within 30 days of receipt and inspection of the material/workmanship. Rejected materials/work is to be removed by the supplier at his own risk and cost from IIT (ISM) Campus within 14 days of intimation of rejection. Defective Supplies are required to be replaced within 15 days of the removal of the rejected materials/work.
19. **Risk Purchase:** IIT (ISM) shall be at liberty to realize from the supplier the differential amount, if any, which it shall have to incur on purchase of the material/work at higher price(s) from elsewhere in the market, if the supplier, due to their fault, fails to supply the ordered quality and quantity of the material/work within the stipulated time.
20. **Conditional offer will not be accepted.**
21. **Payment:** In case of indigenous item i.e. inside India, payment may be released through RTGS / online payment mode against complete execution of the purchase order (PO) and submission of all the required documents as per the order within 30 days after satisfactory supply, inspection,

installation/commissioning & acceptance and on submission of pre-receipted tax invoice, delivery challan, warranty certificate and installation report in triplicate and Performance Bank Guarantee. In case of foreign supply, i.e. outside India i.e., payment may be released through Letter of Credit as per policy of IIT (ISM), Dhanbad. The invoice should be duly certified by the Head of Deptt. of IIT (ISM), Dhanbad to which supply is made or any other IIT (ISM) official authorized for this purpose. IIT (ISM), Dhanbad does not make any advance payment. However, as a special case in foreign supply only, 90% Letter of Credit (LC) Payment term may be accepted against dispatch of required documents as per PO terms and PBG and balance 10% payment via wire transfer/RTGS will be released only after satisfactory installation report and other documents as per PO terms received from the user department from the firm.

22. Advance payment will not be released. Any bid having condition of advance payment will be treated as non-responsive bid.
23. Country of origin and port of shipment must be stated in the technical bid itself in case of foreign supply. Any change at later stage will not be accepted.
24. Name and address of Indian Agent, percentage of agency commission, if any and role of the Agent with respect to the subject supplies and a statement thereon that "Agency Commission is included in the bid.
25. Payment will be released through bank/ RTGS/Wire transfer. The payment will be released after statutory deductions and compensation of delay / liquidated damage (LD) / late delivery etc., if any.
26. Any payment will be released only after satisfactory completion of the work/installation and after submission the certified bill(s) / invoice(s).
27. All communications are to be addressed to the Assistant Registrar, IIT (ISM), Dhanbad quoting the Tender No. and Date.
28. IIT (ISM), Dhanbad reserves the right to accept or reject or cancel any or all tender notice or bid(s) or order(s) at any stage without assigning any reason thereof.
29. For any dispute, the place of jurisdiction shall be Dhanbad (Jharkhand, India) only.
30. It will be the sole responsibility of the bidder(s) that its bid should reach on or before the submission deadline to Registrar, IIT (ISM), Dhanbad.
31. **Governing Law:** The order, placed, will be the contract between the successful bidder(s) and IIT (ISM), Dhanbad and shall be governed by the LAWS of India and under the contract shall be taken by the parties only in Dhanbad (Jharkhand, India) to competent jurisdiction.



32. Bid(s) shall be submitted in official tender form / format only. If submitted in any other form / format, the same shall be rejected. No paper shall be detached from the tender. All pages must be numbered properly and there must be seal and sign of the bidder(s) on all the pages of its bid.
33. The name and address of the bidder(s) shall be clearly written in the space provided and no overwriting, correction, insertion shall be permitted in any part of the tender. The tender should be filled-in and submitted in strict accordance with the instructions laid down herein; otherwise the bid is liable to be rejected.
34. The bid is liable to be rejected if complete information is not given therein, or if the particulars and data (if any) asked for in the Schedule to the tender are not filled-in properly.
35. The successful bidder(s) will indemnify IIT (ISM), Dhanbad, in case of any damage or liability, which may arise on account of any act or omission directly/indirectly attributable to the bidder(s).
36. Dispute, if any arising out of providing the said service(s) shall be settled mutually or arbitration by sole Arbitrator to be appointed by the Registrar, IIT (ISM), Dhanbad at Dhanbad as per the provisions of the Indian arbitration and Conciliation Act, 1996 and the Rules framed there under. The award passed by the said sole Arbitrator, will be binding upon the parties. The arbitration proceedings shall be held at Dhanbad only.
37. The successful bidder(s) shall ensure that its authorized representative should be present at the time of any discussion at IIT (ISM), Dhanbad regarding the bid, for which no any kind of TA/DA/boarding/lodging will be facilitated by IIT (ISM) Dhanbad.
38. The schedules of items/services are required as per Chapter-4 of this tender. Bidder(s) must clearly indicate in its tenders, the different taxes and duties which they propose to charge mentioning clearly the present rate(s) thereof with appropriate reference. Vague offer like "duties as applicable" shall not be considered.
39. Price should be quoted at Price Bid (Part-2) (Chapter – 4 of this tender) only for the item(s)/services as mentioned at Chapter – 4 of this tender. The required item(s)/services to be delivered / provided on or before the dead line as per purchase order.
40. The bidder(s) should be registered with VAT, CST, SST, Income Tax, service tax authorities, GST etc. and to enclose the copies of the relevant certificate along with the technical bids. The agency must be authorized by appropriate government authority to deliver the items/services at the IIT (ISM) Dhanbad.
41. The successful bidder(s) will ensure that its employees/staff/personnel would strictly follow all the security instructions and rules and regulations of IIT (ISM), Dhanbad during their visit in the campus.
42. If the successful bidder(s) commits breach of any of the above or Order's terms and conditions or is not able to deliver the item / provide the services / complete the work on time, the contract will be

cancelled and security deposit shall be forfeited and a damage liability at the discretion of IIT (ISM), Dhanbad will be imposed on the bidder(s).

43. Bills / Invoices raised by the bidder(s) will be subject to applicable statutory deductions including T.D.S.
44. Necessary corrigendum(s), if required, will be issued at any stage, which must be acceptable to the bidder(s). Any corrigendum will be published on our website [www.iitism.ac.in](http://www.iitism.ac.in) only. Bidder(s) must be in touch with our website [www.iitism.ac.in](http://www.iitism.ac.in) for corrigendum(s). It will be sole responsibility of the bidder(s) that they will go through the corrigendum(s) published, if any, on our website [www.iitism.ac.in](http://www.iitism.ac.in) and submit its tender accordingly.
45. Short listed bidder(s) may be called for presentation / demonstration / meeting at IIT (ISM), Dhanbad office with a short notice. Request from the bidder(s) to change the date and time of presentation / demonstration / meeting will not be accepted. If the bidder(s) will not attend for the same, then their bid(s) will be treated as non-responsive and hence the bid(s) will not be considered for further process.
46. Price bids will be opened for those bidder(s) who are shortlisted and declared as technically qualified bidder(s) by the Committee of the IIT (ISM), Dhanbad. In this regard, decision of IIT (ISM), Dhanbad will be final and binding to all the bidder(s).
47. Please note that no part shipment/transshipment/third party shipment is acceptable to us.
48. Submission deadline / last date & time for submission of the bids and date & time for opening of the same are given in this bid. The bids will be opened as per IIT(ISM) rules. Authorized representative of bidders having authorization letter, a govt. issued ID card and an employment ID card issued by the bidder may present during bid opening at their own discretion. In case of submission deadline / last date or bid opening date is a holiday/declared as a holiday, then next working date will be the submission deadline / last date for submission/ opening of tender. Submission deadline or bid opening date & time will not be changed upon any request from the bidder side. However, it may be changed as per IIT(ISM) rules. In this regard, decision of the IIT (ISM), Dhanbad will be final and binding to all the bidders.
49. For the items / services, the bidders must ensure the required quality, quantity, materials, dimensions & other parameters and quote accordingly. In case items / services provided are not same as quoted/ordered, the claim for payment shall not be accepted. No payment, claims for such items / services shall be released. In this regard, decision of IIT (ISM), Dhanbad will final and binding to the bidders.
50. IIT (ISM), Dhanbad at its discretion may change the quantity/quality/parameters/upgrade the criteria/drop any item(s) or part thereof at any stage. In case of any dispute, the decision of IIT(ISM) shall be final and binding on the bidders/tenderers.

51. IIT (ISM), Dhanbad reserves the right to accept or reject any or all the bids in part or in full without assigning any reason and does not bind itself to accept the lowest bid. The decision of the competent authority of IIT (ISM), Dhanbad will be final and binding to the bidder(s).
52. All the bidders, those are interested to participate in this bid, must have to submit the technical specification of their bid in MS-Word Format in a CD with the technical bid. The CD must be marked with the NIT No. and submission deadline.
53. Professional(s) to be deployed by the successful bidder(s) for the supply of the item / installation / execution of the work in order to provide the item(s) /service(s) as per order must be well qualified.
- 54. *If any fraudulent document submitted by the vender/firm is detected at any stage during the procurement or after the procurement, the institute will take appropriate legal action against the vender/firm including the recovery of two times of purchase order/award of work and equipment/items will not be returned.***

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**CHAPTER 3**  
**Schedule of Requirements**

<b><u>Description</u></b>	<b><u>Details</u></b>
NIT No.	CRF-INS-308-19-20
Date of Tender	1 January 2020
Bid submission deadline	22.01.2020 1:00 P.M.
Date of opening of the bids (technical part-1)	22.01.2020 4:00P.M.

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## CHAPTER 4

### PRICE SCHEDULE

#### Price Bid (Part 2)

#### PRICE BID

(Note: This price bid must be in a sealed cover and should be sealed separately from the techno-commercial bid cover.)

The bidder(s) shall quote the amount tendered/financial bids in the following format:

“Price Bid for **Supply and Installation** of Sample Preparation Unit for High Resolution Transmission Electron Microscope (HRTEM).

“I / We ( \_\_\_\_\_ ) on behalf of M/s \_\_\_\_\_

\_\_\_\_\_ hereby undertake to provide **Supply and Installation**, Sample Preparation Unit for High Resolution Transmission Electron Microscope (HRTEM) specified in this tender and our technical bid for an amount of Rs. \_\_\_\_\_ (in words Rupees

\_\_\_\_\_ ) for the item as in **Chapter**

**–4.** The above quoted amount is inclusive of and in accordance with all the statutory liability, Service Charges, Administrative Charges, etc.” as applicable.

**Annexure-I (A)****1. PRICE SCHEDULE FOR GOODS BEING OFFERED FROM ABROAD**

Name of the Bidder \_\_\_\_\_

NIT Reference No. \_\_\_\_\_

File Reference No. \_\_\_\_\_

Sl. No.	Description/Part No./Make Model	Quantity	Unit Price (in foreign currency)	Total Amount (in foreign currency)
1.				
2.				
3.				
Total Ex-Works Price-				
Packing & Forwarding and inland freight				
*FCA (at port)				
Terminal charges, loading on vassal				
**FOB (name of port)				
Air freight & insurance up to destination port				
*CIF				
Carrier charges & insurance up to final destination				
**CIP				
Concessional Custom Duty (Against DSIR Certificate)				
IGST rate (Against IIT (ISM) Certificate)				
Other Duties taxes/clearance charge, if any				
Transportation charges up to IIT ISM Dhanbad				
Chargeable weight/Gross weight of consignment				
Indian agency Commission (%)				
Installation & Commissioning charge				
Training charges, if any				
Additional Warranty Charges, if any				
Annual Maintenance Charge, if any				
Educational discounts, if any				

\*&amp;\*\* Mandatory requirement

Total Bid Price \_\_\_\_\_ in words \_\_\_\_\_

Note :

Total Bid price in foreign currency \_\_\_\_\_ in words

(a) Indian agent name &amp; address \_\_\_\_\_

(b) Installation, commissioning &amp; training charges, if any \_\_\_\_\_

(c) Please note that Indian agents' commission shall be paid in Indian Rupees only.

(d) Banker's details such as- Name of account holder, Account Number, Name of Bank, Branch code, RTGS code, NEFT code, SWIFT code etc.

(f) Price schedule of optional items shall be indicated in a separate sheet in the same performa.

**(g) Quoting Price for FOB/FCA and for CIF/CIP basis, otherwise bid will be rejected.**

(h) Wherever the price quoted on FOB/FCA and CIF/CIP basis are the same, the contract would be made on CIF/CIP basis only.

(i) Country of Origin Dimension and Gross Weight must be provided.

Signature of Bidder

Name \_\_\_\_\_

Business Address \_\_\_\_\_

**Annexure-I (B)****2. PRICE SCHEDULE FOR GOODS BEING OFFERED WITHIN INDIA**

Name of the Bidder \_\_\_\_\_

NIT Reference No. \_\_\_\_\_

File Reference No. \_\_\_\_\_

Sl. No.	Full Description of items with (HSN Code/SAC Code)	Quantity	Unit Price (in INR)	Total Amount (in INR)
1.				
2.				
3.				
Ex-Works Price-				
Packing & Forwarding				
Transportation				
FOR (IIT ISM) Dhanbad				
<u>GST/IGST (their rate(s) as the case may be, clearly specified)</u>				
<u>Please note that IIT ISM is eligible for Concessional GST as per Notification No. 45/2017-Central Tax (Rate) for CGST, 45/2017-State Tax (Rate) for SGST and 47/2017-Central Tax (Rate) for IGST,</u>				
Insurance up to Destination/handover (in case of fabrication)				
Installation & Commissioning charge				
Training charges, if any				
Additional Warranty Charges, if any				
Annual Maintenance Charge, if any				

\*(On the basis of the technical specifications submitted)

Total Bid Price \_\_\_\_\_

in words \_\_\_\_\_

Note :

(a) The Price schedule of optional items shall be indicated in a separate sheet in the same Performa.

(b) Cost spare parts may be indicated separately

Signature of Bidder

Name \_\_\_\_\_

Business

Address \_\_\_\_\_

**UNDERTAKING BY THE BIDDER(S)**

I have carefully gone through the various terms and conditions mentioned in the tender document of **Supply and Installation of Sample Preparation Unit for High Resolution Transmission Electron Microscope (HRTEM)**. I agree to all the conditions and offer to supply the item at IIT (ISM), Dhanbad. I am making this offer after carefully reading the conditions and understanding the same. I have acquainted with all the tasks required to be carried out, before making this offer. I will abide by the corrigendum(s), if any, to be issued by IIT (ISM) Dhanbad on its website [www.iitism.ac.in](http://www.iitism.ac.in). I hereby sign this undertaking as token of our acceptance of various conditions mentioned in tender document. Justification of the price is also attached herewith.

Place: \_\_\_\_\_

Dated: \_\_\_\_\_

Name &amp; Signature of the bidder(s):

Address: \_\_\_\_\_

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## CHAPTER 5

### Contract Form

With reference to the tender reference no. **CRF-INS-308-19-20**, Dated: 1 January 2020 of IIT(ISM), Dhanbad for Supply and Installation, Sample Preparation Unit for High Resolution Transmission Electron Microscope (HRTEM), we (bidder(s)'s name) \_\_\_\_\_ accept all the instructions and terms and conditions of the tender and accordingly hereby submit our quotation no. \_\_\_\_\_ dated \_\_\_\_\_.

#### ALL TERMS AND CONDITIONS OF THE N.I.T. ARE ACCEPTED

1	Name and address of the bidder	
2	Telecom nos. of the bidder i.e. phone fax, & email id.	
3	Signature, name & designation of the person signing on behalf of the bidder & his/her office seal	
4.	Name & designation of the contact person & his phone/mobile no./e-mail ID	

We hereby declare that all statements/details made in this tender are true, complete and correct to the best of my knowledge and belief. I understand that in the event of any information being found false or incorrect at any stage or we do not satisfy any of the stated criteria, our offer is liable to be cancelled automatically and IIT (ISM), Dhanbad may take an action against this firm for such false information including legal action.

**Signature:**

**Name:**

**Designation:**

**Bidder(s)'s Name:**

**Seal:**

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## CHAPTER 6

### Form 6.1- Checklist

#### (to be submitted with technical bid part-1)

Duly sealed and signed (on all pages) of the tender document.	
Demand draft is attached as EMD.	
Form No. 6.4 (Techno-Commercial bid, Part-1) is attached	
Form No. 6.2 and 6.3 are attached with Techno-commercial bid (part-1)	
Details of PAN, TIN, Service Tax Registration No., GST No. etc. is attached	
Bank account details is attached	
Complete contact details (Name, Postal address, E-mail address, phone no. mobile no.) is provided	
Complete technical details attached	
The Techno-Commercial bid (Part 1) is sealed in a separate envelope (ENVELOPE-ONE) with EMD in the form Demand Draft and duly super-scribed as "Techno-Commercial bid (Part 1) - Bid for Supply and Installation of Sample Preparation Unit for High Resolution Transmission Electron Microscope (HRTEM)	
The Price bid (Part 2) is sealed in separate envelopes (ENVELOPE-TWO) and duly super-scribed as "Price Bid (Part 2) – Bid for Supply and Installation of Sample Preparation Unit for High Resolution Transmission Electron Microscope (HRTEM)	
A copy of PAN/Voter Card/Aadhar Card including ID card of the bidder (firm) of the authorized signatory of the bidder(s) is attached with the Form 6.2	

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**Form No.: 6.2**

To,

The Registrar,

Indian Institute of Technology (Indian School of Mines), Dhanbad,

P.O. – I.S.M.

DHANBAD– 826004.

**Ref.:** Your Notice Inviting Tender No. **IIT-ISM / CRF-INS-308-19-20, Dated: 1 January 2020****Sub:** Technical bid relating to **Supply and Installation of Sample Preparation Unit for High Resolution Transmission Electron Microscope (HRTEM)**

Sir/ Madam,

1. I/We have gone through all Chapters of the tender document such as Instructions and Terms and conditions, minimum eligibility criteria, schedule of requirements, Specifications and allied technical details etc. as enlisted by you in your Notice Inviting Tender for the subject under reference.
2. I/We, hereby confirm that we have understood all the above and confirm my/our commitment to abide by them.
3. I/We also confirm my/our commitment to provide the services as enlisted in your Notice Inviting Tender under reference.

**Seal and Signature of authorized signatory of the bidder(s)with date→**

Documents	Yes/No	Document No. (If submitted a copy of the same)
PAN Card/Voter ID/Aadhaar Card		
Official ID Card		
Other Documents (specify below)		

**(A copy of PAN/Voter Card/Aadhaar Card and official ID card of the authorized signatory of the bidder(s) must be attached with this letter.)**

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**Form No.: 6.3**

**(to be submitted with technical bid part-1)**

1. Earnest Money Deposit: DD NO. \_\_\_\_\_ Date: \_\_\_\_\_ Amount: Rs. \_\_\_\_\_  
only, Issued by bank and branch \_\_\_\_\_
2. Validity of Quotation: days from the date submission deadline (minimum 240 days from the submission deadline).....
3. Performance Security or PBG: Will Be Submitted with the proforma invoice or invoice, if Purchase Order placed by I.I.T. (I.S.M.), Dhanbad
4. Payment Terms: Payment after supply, satisfactory installation and submission of all required documents as per Purchase Order after statutory deductions and penalty (liquidity damage), if any as decided by I.I.T. (I.S.M.), Dhanbad.

**ALL THE ABOVE MENTIONED TERMS & CONDITIONS ARE ACCEPTED BY US AND PROFORMA IS SUBMITTED FOR CONSIDERATION.**

\_\_\_\_\_  
Signature & Seal of the Bidder(s)

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**Form No.: 6.4****TECHNO-COMMERCIAL BID (Part-1)****TECHNICAL BID**

1. Name of the Bidder(s).....
2. Name of the authorized person (who signs on the tender document on behalf of bidder(s)) with PAN/Voter Card No./Aadhar No. ....
3. Address of the Bidder(s)..... , Website .....
4. Phone No. .... (Mobile).....Fax..... E-mail .....

**Details of the item and its specification:**

Sl. No	Particulars	Description

**Name of the authorized signatory:**

**Name of the Bidder(s):**

**Contact No.:**

\_\_\_\_\_  
**Signature & Seal of the Bidder(s)**

**ANNEXURE-I****Technical specification of Sample preparation units for High Resolution Transmission Electron Microscope (HR-TEM)**

Following sample preparation units for HRTEM with desired specification should be quoted:

**1) Ultrasonic disperser for Powder sample:**

Complete sample preparation unit for preparation of metallic, metal oxide, polymeric and other powder samples must be included with required accessories.

**2) ION Milling: Ion Milling Unit With Accessories For Tem Specimen**

The ion milling system should be able to thin down both conducting and insulating samples (of 3 mm dia) to the level that they are electron transparent without inducing any artifact in the specimen. The electron transparent regions should be as large as possible for viewing under TEM

**(a) Ion Gun / Source:**

1. System should have two ion guns energy range : minimum of 100 eV to 8000 eV or higher. Ion beam energy shall be continuously adjustable in the full range.
2. Independently adjustable gas control utilizing mass flow controllers to permit either rapid milling or slow precise ion polishing
3. Variable and adjustable ion current and voltage
4. Easy alignment of Ion beams should be possible, with either a fluorescent screen or other suitable mechanism.
5. Variable milling angle from  $+10^{\circ}$  to  $-10^{\circ}$  and fully adjustable during the operation
6. The ion guns should have very long life for continuous operation.
7. Special Operational Mode for preparing cross sectional samples for TEM Analysis should be offered as standard.

**(b) Specimen stage and Specimen Holders**

1. Loading and unloading of the sample should be user friendly
2. Continuous rotation of the specimen stage during milling should be possible.
3. Milling the specimen from one side or any side should be possible
4. Cold stage milling should be possible and required accessories should be quoted
5. To achieve the precise milling of the area of interest (such as the interface in cross sectional specimen), additional alignment involving ion beam cross over adjustment and/or specimen stage movement should be possible.

**(c) Vacuum system**

1. Should be provided with a totally oil-free vacuum system, pumping with turbo pump and appropriate backing pump.
2. Base pressure of  $\sim 1E10^{-5}$  torr or lower
3. Operating pressure of  $\sim 9 \times 10^{-4}$  torr or lower
4. Suitable gauges to monitor the vacuum levels in main chamber and baking pump
5. Specimen exchange system without disturbing vacuum is preferred

**(d) Special features:**

1. Should be provided with sample cooling with Liquid Nitrogen during sample preparation. The cooling/warm-up of the specimen's should be done rapidly ( $\sim 30-45$  minutes)
2. Automatic termination with respect to sample perforation.
3. Option of viewport and optical microscope to view of the sample under preparation

**3. Dimple Grinding Unit**

- a. Depth and thickness control: Through digital and/or analog display with accuracy 10  $\mu$  m (min) or better.
- b. Specimen positioning: Accuracy of minimum  $\pm 15 \mu$  m with the help of microscope and specimen

stage

- c. Operational facilities: table rotation, grinding wheel rotation, variable grinding wheel speed, auto terminator for both grinding wheel and specimen rotation motor, variable grinding load
- d. Dimpling should reduce the thickness of the disc (in the central region) from 100 microns down to 10 microns or less, with no or minimum damage
- e. Automatic termination of the process
- f. A stereomicroscope, to align the specimen position is preferred

#### **4. Disc Punch**

1. Should be able to cut 3 mm diameter circular samples from ductile and soft materials
2. Should be able to smoothly cut discs from typical metal foil of ~100 µm thickness.
3. Design should ensure the prevention of plastic deformation of the disc, especially in the central region of the specimen, while punching
4. Should deliver discs with sharp edges

#### **5. Ultrasonic Disc Cutter**

1. The ultrasonic disc cutter should be able to cut 3 mm discs out of brittle and fragile samples of typical thickness such as 0.5 mm silicon wafers or ceramic without introducing crack or damaging the samples. It should be possible to cut wide range of materials & hence variable manually tunable frequency on the Ultrasonic Cutting Head would be preferred.
2. The instrument should have provision to monitor depth of cut and must have a user-friendly adjustable sample stage which can be positioned to cut desired region of interest with sufficient accuracy.
3. The offer must include 3 mm diameter circular cutting tool along with the cost of adding spare. Also the vendor must provide unit prices of other standard cutting tool sizes and geometries such as 2.3 mm or rectangular cutting tools if available.
4. The offered instrument must come with a stereomicroscope or similar arrangement to facilitate precise positioning of the area of interest at the centre of the tool.
5. All required accessories as well as consumables for out-of-box operation of the instrument must be included.
6. Vendor must also include option of typical tools, accessories and consumables used for TEM sample preparation such as specimen clamping vise, metal tubes for cross-section specimen etc.

#### **6. Disc Grinder**

1. A grinder must be a goniometer type manual disc grinder with precision of 25 micrometer or better to thin down small samples such as 3 mm discs
2. The offer must include heavy base with ultra-flat lapping surface along with hundred lapping discs of various grit sizes for out of box operation.
3. Both metal (at least ten units) as well as transparent (at least ten units) specimen mount must be included as part of the offer. The order shall also include list of consumable items as well as accessories available for the disc grinder.
4. The bidder must also quote prices of optional polishing compound, glue and other consumables and accessories for out-box operation of the instrument.

#### **7. Precision Diamond Sectioning Machine suitable for Hard Metals, composites & ceramic material for TEM sample preparation.**

1. RPM of cutting wheel: Range 50 to 500 or better and with digital display.
2. Sectioning/slicing wheel: Diamond and cBN
3. Maximum sample size weight: Square 25mm x 25 mm and cylindrical with 25 mm diameter or better.
4. Suitable work holding device should be provided.
5. Adequate cooling facility for wheel and work should be provided as standard to minimize cutting temperature.



6. Cut-off wheels for hard and brittle materials, cooling fluid, sample holders and all required consumables & accessories.

7. Machine should have safety enclosure and CE certification.

**5. Uninterrupted power supply (UPS):** One (01) Online UPS (5 kVA) with one hour back up should be provided for ion milling system.

**6.** Offered instruments must be a standard items with verifiable and proven track record. The vendor may be required to demonstrate the capability of an instrument by on-site (at IIT(ISM) Dhanbad) preparation of high quality samples of different material of our choice for HRTEM analysis.

7. Safety certification (CE) is a mandatory requirement for all the equipment in this NIT.

**8. Guarantee/Warranty:** All sample preparation units (including consumables), UPS (including Battery) must have warranty for free repairs and replacement for a period of 5 years from the date of installation and commissioning. Vendor should provide onsite comprehensive warranty with response time of 24 hours for optimal operation of the sample preparation units for 5 Years.

**9. Training:** On site full scale workshop-cum-training (Twice in a year for entire warranty period) to the researcher/operator by the application expert from the principal company (for both the HRTEM and Sample Preparation units).

**10. Compliance statement should be provided.**

**11.**The company should have the experience of setting up and supporting at least 3 similar type of TEM Sample preparation laboratory across country at institutes like IITs, IISc and other public funded research and academic institutes of repute. Name of these facilities, details of equipment supplied, facility manager names and references should be provided along with the bid.

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