



भारतीय प्रौद्योगिकी संस्थान (भारतीय खनि विद्यापीठ), धनबाद

धनबाद, झारखण्ड, भारत, पिन-826004

(मानव संसाधन विकास मंत्रालय, भारत सरकार के अधीन राष्ट्रीय महत्व का एक संस्थान)

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

DHANBAD, JHARKHAND, INDIA, PIN-826004

(An Institute of National Importance under Ministry of H.R.D., Govt. of India)

STORES & PURCHASE SECTION Phone:(0326) 2235678 || Email : purchase@iitism.ac.in || Website : www.iitism.ac.in

No. Chemical/INS/323/18-19

Date: 7 January 2019

NOTICE INVITING TENDER

Subject: Supply & Installation of Residence Time Distribution (RTD) Studies in a Combines Reactor.

Indian Institute of Technology (Indian School of Mines), Dhanbad invites quotations for the following to be supplied and delivered in Chemical Engineering Department.

S No	Full Description of items/ store	Qty	Delivery
1	Supply & Installation of Residence Time Distribution (RTD) Studies in a Combines Reactor. (Detailed Specification is given in Annexure – I)	01 No.	At the Earliest /Ex-Stock

Tender Schedule

Particulars	Date & Time
Bid Security or Earnest Money Deposit	Rs. 6,000.00 (Six Thousand Only)
Last date and time for submission of tenders	29.01.2019 at 1:00 P.M.
Date and time of opening of tenders	29.01.2019 at 4.00 P.M.

1. You are requested to quote your lowest rates for the supply of above items in the attached format for Financial Bid (Annexure – II)
2. You may send your representative in the office of the undersigned at the scheduled date and time of opening of tender.
3. Tender should be submitted in sealed cover only superscribed with Enquiry No. and due date at the following address only:

The Deputy Registrar (P&S)

Indian Institute of Technology (Indian School of Mines),

Dhanbad – 826 004 Jharkhand



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Terms & Conditions

- 1) The rates should be quoted for each item separately.
- 2) Conditional offer will not be accepted.
- 3) IIT (ISM) does not issue any Form 'C' or 'D' towards sales tax concessional rate. Hence, full rate of sales tax/VAT, GST applicable should be quoted.
- 4) **Educational discount**, if any, should be clearly mentioned.
- 5) You are requested to submit your quotation strictly as per the specifications mentioned in the NIT.
- 6) Earnest Money Deposit (EMD): Should be submitted in form of A/C payee demand draft drawn in favor of Registrar, IIT(ISM) and payable at SBI, IIT (ISM) campus branch or any other Bank/ Branch located in Dhanbad.
- 7) You are requested to submit your quotation strictly as per the specifications mentioned in the NIT.
- 8) Your tender must be valid for **minimum 90 days** from the date of opening of tender.
- 9) Please mention warranty/ guarantee in your offer clearly. Material/ equipment to be supplied must have minimum warranty/guarantee of **36 Months**.
- 10) Each page in the bid document must be numbered properly and duly signed & sealed by the bidder on every page of the bid.
- 11) **The items/ materials shall be required to be delivered at Chemical Engineering Department/ Section through Purchase & Store Section, IIT (ISM) Dhanbad at the risk and cost of the tenderer.**
- 12) Unloading and installation shall be the complete responsibility of the supplier.
- 13) The stores are required to be delivered within 30 days. Late delivery may not be accepted.
- 14) The items offered should be of good quality confirming to BIS standards, wherever applicable.
- 15) Successful bidders may have to submit Performance Security (PBG) in the form of Bank Guarantee only as per the Purchase Order as per rules.
- 16) **Advance payment is not admissible.** Payment shall normally be made within 4-6 weeks subject to receipt and acceptance & installation (as per Purchase Order Terms) of the ordered materials/items.
- 17) In the event date on which the tender is opened for acceptance is declared to be a holiday, the tenders shall be deemed to remain open for acceptance till the next working day.
- 18) Please send your offer by Regd. Post/ Speed Post/ Courier along with Courier receipt. Tender/ quotation will be received during IIT (ISM) working hours only (i.e. Monday to Friday). *Late or delayed tenders shall be summarily rejected.*
- 19) Any other information that you may like to obtain, you are free to contact IIT (ISM) before submission of tender.
- 20) IIT (ISM) reserves the right to accept and/or to reject any/ all tenders without assigning any reason.

Assistant Registrar



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Annexure – I

TECHNICAL SPECIFICATIONS FOR SUPPLY & INSTALLATION OF RESIDENCE TIME DISTRIBUTION (RTD) STUDIES IN A COMBINED REACTOR (SERIES OF PLUG FLOW REACTOR AND MIXED FLOW REACTOR)

Section 1: General specification

- A stand alone setup of combined reactor unit firmly seated on a rigid base made of powder coated MS structure in order to carry out the residence time distribution (RTD) studies in laboratory scale.
- The combined reactor unit must comprise of two reactors connected in series, i.e., plug flow reactor (PFR) and mixed flow reactor (CSTR).
- There must be a provision to interchange the position of the two reactors:
i.e., (i) PFR followed by CSTR &
(ii) CSTR followed by PFR
- Suitable provision like a septum arrangement must be given for the tracer to be injected to each of the reactors (PFR as well as CSTR).
- A minimum of 10 no's of septum should be provided as spare.
- The PFR must be of approximately 2 -3 liter capacity.
- The CSTR must be of approximately 3 - 5 liter capacity.
- Both PFR and CSTR, necessary connectors, valves and other accessories must be made of SS304.
- The CSTR must have an agitator coupled with a motor with proper display and provision to alter the speed of agitator.
- Two feed tanks of 20 – 25 liter capacity each must be provided.
- The feed movement is to be made by means of an air compressor.
- The range of pressure regulator must be provided: 0 – 1.5 kg/cm² or higher.
- A standard pressure gauge must be furnished: 0 – 1.5 kg/cm² or better.
- Two properly sized rotameters for the measurement of flow rate is to be provided.
- Valves are to be provided to change the feed and product flow from one reactor to the other.
- All electrical circuits are to be fitted with appropriate protection devices.
- The entire set up must be coated to protect from corrosion, weathering, abrasion and other processes that would degrade the material over time.
- A comprehensive instruction manual with details installation and operating procedures is required to be provided.
- A suitable thermal conductivity meter for RTD study should be quoted as optional item.

Power requirement: 220-240 V/ Phase 1/50 Hz, 15 amp



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Section 2. List of other Certificates/items to be produced by the OEM/Supplier:	
1	(i) That they are the original equipment manufacturer of the equipment/ instrument (base) and (ii) A certificate is required from original equipment manufacturer (OEM) that their equipment and accessories meet all minimum specifications as given in Section 1.
2	A three year warranty certificate including technical and maintenance support is required from original equipment manufacturer (OEM).
3	Detailed Catalogue/Data Sheet of the quoted item(s).
4	Clientele List (preferably centrally funded technical institutions/labs).
5	Performance Letter from the Clients.
6	Compliance chart with respect to NIT specification, supported by catalogue and manufacturer website to be provided.
7	All essential accessories to run the equipment to be quoted.



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Annexure – II (A)

1. PRICE SCHEDULE FOR GOODS BEING OFFERED FROM ABROAD

Name of the Bidder _____ (On bidders letter head)

NIT Reference No. **Chemical/INS/323/18-19**

Date: 7 January 2019

Bidder's Reference No. _____

Date:

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				
Total Ex-Works Price-				

*&** Mandatory requirement

##Total Bid Price _____ in words _____

Note :

Total Bid price in foreign currency _____ in words

- Indian agent name & address _____
- Installation, commissioning & training charges, if any _____
- Please note that Indian agents' commission shall be paid in Indian Rupees only.
- Banker's details such as- Name of account holder, Account Number, Name of Bank, Branch code, RTGS code, NEFT code, SWIFT code etc.
- Price schedule of optional items shall be indicated in a separate sheet in the same performa.
- Quoting Price for FOB/FCA and for CIF/CIP basis, otherwise bid will be rejected.
- Wherever the price quoted on FOB/FCA and CIF/CIP basis are the same, the contract would be made on CIF/CIP basis only.
- Country of Origin, Dimension and Gross Weight must be provided

Signature of Bidder

Name _____

Business Address with contact details _____



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Annexure – II (B)

2.PRICE SCHEDULE FOR GOODS BEING OFFERED WITHIN INDIA

Name of the Bidder _____ (On bidders letter head)

NIT Reference No. **Chemical/INS/323/18-19**

Date: 7 January 2019

Bidder's Reference No. _____

Date:

Sl. No.	Description/Part No./Make Model	Quantity	Unit Price (in foreign currency)	Total Amount (in foreign currency)
1.				
2.				
3.				
	Ex-Works Price-			
	Packing & Forwarding			
	Transportation			
	FOR (IIT ISM) Dhanbad			
	GST/IGST (their rate(s) as the case may be, clearly specified)			
	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,			
	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 with contact details _____