



**NATIONAL INSTITUTE OF TECHNOLOGY  
ROURKELA – 769 008, ODISHA**

**Advertised Tender Enquiry**

**Department: CHEMICAL ENGINEERING**

**Tender Notice No: NITR/PW/CH/2019/178**

**Date: 06.12.2019**

**Important Dates**

To

**Through  
CPP PORTAL  
(E-procurement)**

<b>Event</b>	<b>Date</b>	<b>Time</b>
Pre-bid Conference	<b>NA</b>	<b>NA</b>
Last Date of submission of bid	<b>27/12/2019</b>	<b>05:00 PM</b>
Date of opening of techno-commercial bid	<b>30/12/2019</b>	<b>03:00 PM</b>

Dear Sir,

We intend to purchase the commodities specified below and invite quotations in accordance with the terms and conditions detailed in the bid document. If you are interested, kindly send your offer with prices and complete terms within the time mentioned above.

For any clarification:

Yours sincerely,

Attn.: **Dr. B. Saha**

CHEMICAL ENGINEERING DEPARTMENT  
NATIONAL INSTITUTE OF TECHNOLOGY  
ROURKELA – 769 008, ODISHA  
Phone: 0661 – 2462252  
Fax: 0661 – 2462999  
E-mail: [sahab@nitrkl.ac.in](mailto:sahab@nitrkl.ac.in)

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Name: **Prof. Dr. Biswajit Saha,**  
**Assistant Professor**  
**CHEMICAL ENGINEERING DEPARTMENT**

**Encl :**

- 1. Schedule of requirement, specifications, dates etc.**
- 2. Bid document containing detail terms and conditions.**

**1. Schedule of requirements**

<b>Sl. No.</b>	<b>Description of Goods/Service</b>	<b>Quantity</b>
01.	SOLAR THERMAL TRAINING SYSTEM	<b>01</b>

**2. Specifications and allied Technical Details**

As per annexure- I

**3. Format of Quotation** (tick appropriate box)

It is a two-part bid with separate techno-commercial and price bids.

**4. The bid envelope should be submitted through**

<https://eprocure.gov.in/eprocure/app>

**5.** Quotations should be valid for a period of **120 days** from the date of opening of techno-commercial bid.

**6. Some important dates:**

- i. Pre-bid Conference: Date: **NA** Time: **NA**
- ii. Last date of submission of bid Date :- **27/12/2019** Time:- **05:00 PM**
- iii. Opening of techno-commercial bid: Date :- **30/12/2019** Time:- **03:00 PM**

**7. Warranty** of **1 year** must be provided.

**8. GST:** GST should be charged according to applicable rates.

**9. Bid Security and Tender Cost:** Bid Security in shape of DD (Demand Draft) for **INR 7,000/- (Rupees Seven Thousand Only)** and Tender Cost (Non-refundable) in the form of DD(Demand Draft) for **INR 500/- (Rupees Five Hundred Only)** in favor of **Director, NIT Rourkela Payable at Rourkela** from any Scheduled Commercial Bank except Co-operative and Gramin bank. Demand Draft for the Bid-Security should remain valid for a period of 45 days beyond the bid validity period from the date of opening of bids. Bid security of unsuccessful bidders should be return to them at the earliest and latest on or before the 30<sup>th</sup> day after the award of the contract. Bid security and Tender Cost should reach physically through speed post/ register post/courier, containing in an envelope & superscripted with subject, tender reference number addressing to **Registrar, NIT Rourkela-769008, Odisha; on or before 30/12/2019 at 03:00 PM.**

**10. Performance Security: INR 18,000/- (Rupees Eighteen Thousand Only)** in shape of Bank Guarantee/Demand Draft (DD) in favor of Director, NIT Rourkela payable at Rourkela from any Scheduled Commercial Bank except Co-operative and Gramin bank. Performance security should remain valid for a period of 60 days beyond the date of completion of all contractual obligations of the supplier including warranty obligation. And EMD (Earnest Money deposit) amount of successful bidder will be returned after the receipt of performance security in case of award of contract to successful bidder.

- 11.** (i) Minimum 10 numbers of Certificates of Installation of above instrument from NIT, IIT and Indian government laboratories.  
(ii) Client Contact List of same products are to be submitted.  
(iii) Client Testimonials for same products are to be submitted.  
(iv) Original Photographs of same products are to be submitted.  
(v) Physical Demonstration of same products may be required before finalizing the Tender.
- 12.** Please go through the enclosed "bid document" carefully for other bidding instructions.
- 13.** Please send your quotations through <https://eprocure.gov.in/eprocure/app>
- 14.** For technical details, you may contact

Prof. B. Saha  
Department of Chemical Engineering  
National Institute of Technology, Rourkela – 769 008  
Phone: 0661 – 2462251  
Fax: 0661 – 2462999  
E-mail: [sahab@nitrkl.ac.in](mailto:sahab@nitrkl.ac.in)



**NATIONAL INSTITUTE OF TECHNOLOGY  
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**BID DOCUMENT**

**1. Instructions to the bidders**

- 1.1 Bids are invited on behalf of the Director, National Institute of Technology (NIT), Rourkela – 769 008, Odisha, from the intending bidders for supply of the goods/stores/equipment's for the Institute as detailed in the enquiry letter.
- 1.2 The bidders should quote their offer/rates in BOQ in clear terms without ambiguity.
- 1.3 In case of any discrepancy between the rates in figures and that in words, the rate in words will be accepted as correct.
- 1.4 The last date for receipt of the bid is marked in the enquiry.
- 1.5 The bids should be uploaded in <https://eprocure.gov.in/eprocure/app> Please follow the guidelines of the site.
- 1.6 If a prospective bidder requires any clarification in regard to the bidding documents, he may make a request the concerned officer or faculty member at least 15 days before the deadline for receipt of bids.
- 1.7 Each bidder shall submit only one bid. A bidder, who submits more than one bid, shall be disqualified and considered non-responsive.
- 1.8 (In respect of high value plant, machinery etc. of a complex and technical nature). The bids may be submitted in two parts, viz., technical bid and financial bid.
- 1.9 The bidder has to sign in full at all pages of the scanned part of the bidding document. No over-writing in those pages is acceptable.
- 1.10 Bidders registered with any of the following agencies/ bodies as per Public procurement policy for Micro & Small Enterprises (MSE) order 2012 are exempted categories from payment of EMD provided that the registration Certificate issued by any one of these below mentioned agencies must be valid as on close date of tender. Micro small or medium enterprises who have applied for registration or renewal of registration with any of these agencies/bodies but have not obtained the valid Certificate as on close date of tender are not eligible for exemption.
  - i) Khadi and Village Industries Commission (KVIC)
  - ii) National Small Industries Corporation (NSIC)
  - iii) Any other body specified by Ministry of MSME/GOI

**2. Conditions of the bid**

- 2.1 The rates quoted should preferably be net, inclusive of packing, forwarding, freight, Insurance and all other incidental charges including taxes. In case these charges are quoted extra in addition to the quoted rates, the amount thereof or Ad Valorem rate must be specified. Packing, forwarding, freight, entry tax etc., when quotes separately are reimbursable at actual. If external agencies are employed, their receipts must be enclosed with the invoice.
- 2.2 Duties and Taxes are to be quoted separately. Ad Valorem rates thereof should be clearly indicated with reference to the relevant Acts and Rules.

**It may be noted that the Institute is availing custom duty exemption in terms of Notification No. 51/96 – Customs dt. 23.07.1996, Notification No. - 47/2017- Integrated Tax (Rate) dt. 14.11.2017 and Notification No- 45/2017 – Integrated tax (Rate) dt. 14/11/2017 & Notification No. - 45/2017- Central tax (Rate) dt. 14.11.2017, Notification No. - 45/2017- Union Territory Tax (Rate) dt. 14/11/2017 [Vide DSIR, Ministry of Science and Technology, Government of India, Registration No.: TU/V/RG- CDE (227)/2016, dated: 13.11.2018]**

- 2.3 The goods are required to be delivered at the indenting Department of NIT, Rourkela, and must be reached within **90 days** from the date of placement of the supply of order under the risk and arrangement of the bidder and offers with delivery beyond the above period shall be treated as unresponsive. In case the delivery time is higher, the same must be mentioned clearly in the quotation.
- 2.4 The bid should remain valid for a period of **120 days** from the date of opening. In case your offer has a different validity period that should be clearly mentioned in the quotation.
- 2.5 Conditional discount, if any, offered by the bidder shall not be considered at the time of evaluation.
- 2.6 The goods offered should strictly conform to the specification and technical details mentioned in **Annexure - I**.
- 2.7 The Institute may like to conduct pre-dispatch inspection of goods, where applicable.
- 2.8 Period of guarantee/warranty, where applicable, should be specified in the bid.
- 2.9 If the successful bidder, on receipt of the supply order, fails to execute the order within the stipulated period, in full or part, it will be open to the Director, NIT, Rourkela to recover liquidated damage from the firm at the rate of 1 percent of the value of undelivered goods per month or part thereof, subject to a maximum of 5 percent of the value of undelivered goods. Alternatively, it will also be opened to the Director, to arrange procurement of the required goods from any other source at the risk and expenses of the bidder.
- 2.10 The successful bidder may be required to execute a contract, where applicable.
- 2.11 The bidder has to furnish up to date GST and Income Tax Clearance Certificate along with the bid which will be mandatory clause while technical bid evaluation.
- 2.12 Payment (100 percent after delivery) will be made by Account Payee Cheque /Bank Draft, on delivery and after successful completion of training, installation, configuration, testing, and implementation with existing infrastructure and proper verification of high performance computing cluster whichever is later/latest.
- 2.13 In case of Advance payment, the payment will be made on either in Foreign Demand Draft or Wire Transfer only. The proforma invoice copy need to be sent for advance payment.
- 2.14 In the event of any dispute arising out of the bid or from the resultant contract, the decision of the Director, NIT, Rourkela shall be final.
- 2.15 The bid document/resultant contract will be interpreted under Indian Laws.

**Detail specification of SOLAR THERMAL TRAINING SYSTEM**

<b>S.no.</b>	<b>Component</b>	<b>Sub-component</b>	<b>Specification</b>
<b>1</b>	<b>Artificial light source unit</b>	<b>Halogen Cases</b>	
		Quantity	1
		Material	SS
		<b>Halogen Lamps</b>	
		Number	21
		Power Rating (each)	150 (W)
		<b>Halogen Regulator</b>	
		Power Rating	5000 W
<b>2</b>	<b>Flat plate collector unit</b>	Capacity	50 litre
		Type	Flat plate collector type
		Dimension	915*810*95mm <sup>3</sup>
		No. of risers	6
		Selective coating type	Black nickel
		Collector material	Copper
		No. of Storage tanks	3
<b>3</b>	<b>Support structure</b>	No. of structures	2
		Material	MS
		Wheels	4 (per unit)
		Fan power rating	160 W
<b>4</b>	<b>Measuring unit</b>	No. of T-meters	4
		Flow meters	1
		Pressure meters	2
		Regulators	2
		Box material	FRP
<b>5.</b>	<b>Training</b>	Training and transfer of expertise to student and technician at NIT Rourkela is need after delivery of equipment	
<b>6.</b>	<b>Other technical details</b>	<p>i) Minimum 10 numbers of Certificates of Installation of above instrument from NIT, IIT and Indian government laboratories.</p> <p>ii) Client Contact List of same products are to be submitted.</p> <p>iii) Client Testimonials for same products are to be submitted.</p> <p>iv) Original Photographs of same products are to be submitted.</p> <p>v) Physical Demonstration of same products may be required before finalizing the Tender.</p>	

**6. List of Experiments that can be performed using the experimental setup:**

- i. Evaluation of different parameters (UL, FR and  $\eta$ ) in thermosyphonic mode of flow with fixed input parameters
- ii. Evaluation of different parameters (UL, FR and  $\eta$ ) in thermosyphonic mode of flow at different radiation level
- iii. Evaluation of different parameters (UL, FR and  $\eta$ ) in thermosyphonic mode of flow at different inlet water temperature
- iv. Evaluation of different parameters (UL, FR and  $\eta$ ) in thermosyphonic mode of flow with different wind speed
- v. Evaluation of different parameters (UL, FR and  $\eta$ ) in forced mode of flow with fixed input parameters
- vi. Evaluation of different parameters (UL, FR and  $\eta$ ) and drawing of different curves in forced mode of flow with different flow rate
- vii. Evaluation of different parameters (UL, FR and  $\eta$ ) in forced mode of flow at different radiation level
- viii. Evaluation of different parameters (UL, FR and  $\eta$ ) in forced mode of flow at different inlet water temperature
- ix. Evaluation of different parameters (UL, FR and  $\eta$ ) in forced mode of flow at different wind speed
- x. Evaluation of different parameters (UL, FR and  $\eta$ ) in forced mode of flow at different incident angle
- xi. Evaluation of different parameters (UL, FR and  $\eta$ ) in thermosyphonic mode of flow at different tilt angle

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