NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA-769008 (ODISHA)

An Institute of National Importance under Ministry of HRD, GOI

NOTICE INVITING TENDER

Tender Notification No: NITR/PW/CH/2019/178 **Dated: 06.12.2019**

The National Institute of Technology, Rourkela invites bids from the eligible bidders for procurement of **SOLAR THERMAL TRAINING SYSTEM** at NIT Rourkela.

Last date of Submission of Bid : 27/12/2019 by 05:00 PM

Opening date of Techno-commercial Bid: 30/12/2019 at 03:00 PM

For Details: http://nitrkl.ac.in/OldWebsite/Jobs_Tenders/9Equipment/Default.aspx

Contact: **Prof. Biswajit Saha, CH**;
Ph: 0661-2462252
Email: sahab@nitrkl.ac.in
Bidding through: https://eprocure.gov.in/eprocure/app

Sd/-
REGISTRAR

NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA-769008, ODISHA

(OPEN TENDER NOTICE NO: NITR/PW/CH/2019/178 Dated: 06.12.2019)

Procurement of Solar Thermal Training System

Sl. No.	Description of Goods/Service	Quantity
1.	SOLAR THERMAL TRAINING SYSTEM	01

1. **Quantity required: As mentioned above** (**All information provided in technical specification in Annexure I)**
2. **Delivery** : Within **90 days** from the date of purchase order
3. **Last date of Submission of Bid : 27/12/19 by 05:00 PM**
4. **Opening date of Techno-commercial Bid: 30/12/19 at 03:00 PM**
5. The firm should not have been black listed at any time.
6. The submission of following bids by the tenderer should be through https://eprocure.gov.in/eprocure/app . Please follow the guidelines as per the portal.

Procurement of Solar Thermal Training System

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7. Liquidated damage clause will be charged for any delay in supply of goods.
8. The validity of the tender shall be **120 days** from the date of opening of the bids.
9. Detailed advertisement including all tender documents is also available in our website at http://nitrkl.ac.in/OldWebsite/Jobs_Tenders/9Equipment/Default.aspx
10. NIT reserves the right to qualify or deny prequalification of any or all applicants without assigning any reasons.

REGISTRAR
NIT, Rourkela
Fax No- 0661-2462022
Ph. No -0661-2472021

Annexure –I

Detail specification of SOLAR THERMAL TRAINING SYSTEM

S.no.	Component	Sub-component	Specification
1	**Artificial light source unit**	**Halogen Cases**	
		Quantity	1
		Material	SS
		Halogen Lamps	
		Number	21
		Power Rating (each)	150 (W)
		Halogen Regulator	
		Power Rating	5000 W
2	**Flat plate collector unit**	Capacity	50 litre
		Type	Flat plate collector type
		Dimension	$915*810*95mm^3$
		No. of risers	6
		Selective coating type	Black nickel
		Collector material	Copper
		No. of Storage tanks	3
3	**Support structure**	No. of structures	2
		Material	MS
		Wheels	4 (per unit)
		Fan power rating	160 W
4	**Measuring unit**	No. of T-meters	4
		Flow meters	1
		Pressure meters	2

		Regulators	2
		Box material	FRP
5.	**Training**	Training and transfer of expertise to student and technician at NIT Rourkela is need after delivery of equipment	
6.	**Other technical details**	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.	

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

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

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