

# DEPARTMENT OF CHEMICAL ENGINEERING NOTICE INVITING QUOTATION

#### To

(Supplier Address)

Sealed quotations are invited from reputed Authorized Dealers / manufacturers for the supply of the Items.

Name of the Item		:	PYROLYSIS REACTOR	
Qua	Quantity Required		01 No	
Spe	Specification		(As per enclosed Schedule Annexure – I)	
1.	Quotation Reference No.	:	NITT/F.NO.056/CAPEX/2024-25/CHE	
2.	Last date and Time for receipt of quotation		18-11-2024 before 11.00 AM	
3.	Date &Time of opening of Quotation	:	18-11-2024 at 02.00 PM	
4.	EMD Amount	:	Rs.5,400/-	
5.	Validity (Days)	:	90 Days	
6.	Address to which quotations are	:	The Director,	
	to be sent		National Institute of Technology,	
			Tiruchirappalli – 620 015, Tamil Nadu,	
			India	
	Kind attention to	:	Dr. N. Samsudeen	
	Phone	:	0431 250 3100	
	E-mail	:	samsudeen@nitt.edu	

- 1. Quotations should be submitted in the format given in Annexure I and Annexure-II
- 2. The envelope should contain the following details:

# "QUOTATION AGAINST ENQUIRY" (PYROLYSIS REACTOR)

NITT/F.NO.056/CAPEX/2024-25/CHE

Kind attention to: Purchase Initiator: Dr.N.SAMSUDEEN, Associate Professor

**Department: Chemical Engineering** 

Last date and Time for receipt of quotation : 18-11-2024 before 11 00 AM



#### **Earnest Money Deposit(EMD)**

- Earnest Money Deposit (EMD) is to be submitted through SBI collect link as below. The bids submitted without EMD will be treated as non-responsive and will be rejected. EMD shall bear no interest.
- 2. Bidder must fill the EMD returning Form (Annexure-III) and submit along with the quotation.
- 3. EMD will be returned to the unsuccessful Bidder(s) as per the purchase norms.
- 4. The EMD shall be forfeited if any Bidder withdraws the offer before finalization of the tender.
- 5. UDYAM & NSIC registered Micro & small enterprises are exempted from paying EMD amount as per Govt. norms (proof to be attached). For availing exemption, the bidder must be the manufacturer of the offered product in case of bid for supply of goods. In respect of bid for Services, the bidder must be the Service provider of the offered services. Traders are excluded from the purview of Public Procurement Policy for Micro and Small Enterprises.

Rs.5,400/-
https://www.onlinesbi.sbi/sbicollect/icollecthome.htm?corpID=1768557

The bidder must enclose SBI collect receipt along with the quotations, failing which the bid shall be rejected without any further communication.

### **Terms and Conditions:**

- 1. The quotation must be in the format furnished by NIT Tiruchirappalli and should be free from corrections/erasures. In case there is any unavoidable correction it should be properly attested. If not, the quotation will not be considered. Quotation written in pencil and incomplete will be rejected.
- 2. You are invited to submit your most competitive quotation for the supply of goods according to the specifications and delivery terms as given.
- 3. Bidders may send the quotations in sealed covers with the quotation reference number and last date for receipt of quotations duly superscribed on the cover. Mention the company Contact Number / E-mail id on the cover.
- 4. Quotation will be opened on due date at 18-11-2024 at 02.00 PM at the Store and Purchase Section, NIT, Tiruchirappalli in presence of the tenderers or their representatives who may wish to be present.
  (Any change in the date, time and venue of the quotation opening will be informed to the bidders through telephone / E-mail)
- 5. The National Institute of Technology, Tiruchirappalli reserves the right to accept or reject any quotations, and to cancel the bidding process, and reject all quotations at any time prior to the award of order without assigning any specific reason thereof.



- 6. Manufacturer's name and country of origin of materials offered must be clearly specified. Printed brochures, Purchase preference is only for Micro & Small enterprises (MSE's) register in UDYAM Portal or NSIC as per Ministries policy for MSE's. Proof to be attached
- 7. Samples must be submitted where specified along with the quotations. Samples must be carefully packed, sealed and labelled clearly with enquiry number, subject and sender's name for easy identification. Rejected samples will be returned at your cost if insisted
- 8. All supplies are subject to inspection and approval before acceptance. Manufacturer / supplier warranty certificates and manufacturer / Government approved lab test certificate shall be furnished along with the supply, wherever applicable
- 9. National Institute of Technology, Tiruchirappalli reserves the right to modify the quantity specified in this enquiry.
- 10. Startup company exempted from prior turnover & prior experience (startup certificate registered with DIPP should be enclosed)
- 11. The bidder has to submit the bids in sealed envelope, (separate for each tender). Further Bidder should not send clubbing many tenders in one envelope, in such case all the bids will be rejected.

#### 12. Bid Price

- a. The contract shall be for the full quantity Bidders must quote for entire quantity. Each bidder shall submit only one quotation in Indian Rupee only.
- b. Post work orders & completion certificate should be submitted, wherever applicable.
- c. The rates quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
- d. GST, packing, forwarding and delivering other allied items at the destination shall be included in the price. All such price components may be shown in the quotation. If there is no indication regarding above charges. It will be considered as inclusive of all charges.
- e. If any arithmetic mistake in total / GST calculation is observed, the same shall be corrected by the purchaser with an intimation to bidder
- f. In case the items in the enquiry are covered by any rate contract or any other state or central Government, it should be specified in your quotation and accepted contract rates should also be mentioned. It should be confirmed whether you could supply at the RC rates outside rate contract
- g. Quotations containing conditions like "subject to prior sale" may not be considered.
- h. Delivery period required for supplying the material should be invariably specified in the quotation
- i. Bids without quoting GST (unless exempted) will be treated as invalid & disqualified.
- j. If there is a discrepancy between unit price and total price, the unit price will be considered. If there is any mismatch between figure and word, the amount in word shall prevail.
- 13. **Evaluation of quotations:** Quotations will be evaluated item-wise or lump sum basis. The purchase committee will evaluate and compare the quotations determined to be substantially responsive i.e. (i) are properly signed; (ii) Conform to the terms & conditions and specifications; and (iii) price offered are competitive.

#### 14. Award of contract



- a. The National Institute of Technology, Tiruchirappalli will award the Order for supply of Goods / Services to the bidder whose quotation has been determined to be substantially responsive, and who has offered the lowest evaluated quotation price.
- b. The Bidder should furnish the contract agreement and performance security within 15 days from the date of receipt of the order for supply of goods / services, failing which the order will be cancelled without further notice and awarded to next eligible bidder.
- c. Notwithstanding the above, National Institute of Technology, Tiruchirappalli reserves the right to accept or reject any quotations, and to cancel the bidding process, and reject all quotations at any time prior to the award of order without assigning any specific reason thereof.
- d. National Institute of Technology, Tiruchirappalli, prior to the expiration of the quotation validity period, will notify the bidder whose bid is accepted for the award of contract. The terms of accepted offer shall be incorporated in the purchase order.

#### 15. Warranty: 12 months

- 16. **Performance Security:** Security deposit should be **3%** of purchase order value in case of Performance Bank Guarantee should be valid for 60 days beyond the guarantee & warranty. The successful bidder need to submit performance security (As mentioned in Annexure –I) of purchase order value either in the form of bank guarantee or crossed demand draft drawn on any Nationalized bank in India in favor of "The Director, NIT, Tiruchirappalli" payable at Trichy. The bank guarantee / Demand Draft will be returned to the supplier after 60 days from date of successful completion of supply, installation, and the warranty period.
- 17. **Payment:** 100% will be paid after Installation and satisfactory working/date of completion of service if the documents are in order. The bill should be raised in favor of "The Director, National Institute of Technology, Tiruchirappalli, Tamil Nadu, India." with institute GST No. 33AAATN5491Q1ZZ.No advance will be provided to the supplier and installer.

#### 18. Liquidity damages

- If the bidder / supplier, after accepting the Purchase Order or supply of Goods / Services, fails to deliver any or all of the Goods or to perform Services within the period(s) specified in the Order, The National Institute of Technology, Tiruchirappalli shall impose penalty without assigning any reasons to the bidder / supplier a sum equivalent to 0.50 % of the total cost as indicated in the Purchase Order (which will be deemed as agreed price) for each week or part thereof of delay until actual delivery or performance is completed and such penal charges shall be limited to a maximum of 5% of the agreed price. Once the maximum is reached The National Institute of Technology, Tiruchirappalli, may proceed on its own to consider the termination / cancellation of the Order and may inform the bidder about the cancellation of the said purchase order. unless extension is obtained in writing from the office / Department on valid ground before expiry of delivery period
- 19. If the deliveries are not maintained and due to that account Procuring Entity is forced to buy the material at your risk and cost from elsewhere, the loss or damage that may be sustained there by will be recovered from the defaulting supplier
- 20. Dispute clause: Any dispute relating to the Enquiring /Tender of the indented item shall be under the Hon'ble Court having its jurisdiction over Tiruchirappalli only
- 21. Startup company exempted from Prior Turnover & Prior Experience (Startup certificate registered with DIPP should be enclosed)



22	GST as applicable
	GGT de applicable
23.	Performance Bank guarantee should be valid for 60 days beyond the guarantee & warranty and the BG submitted for EMD shall be valid for 45 days beyond bid validity period.
24.	The successful bidder should submit <b>Security Deposit/PBG</b> within 15 days from the date of placement of order. The <b>EMD</b> shall be returned only after receipt of SD. If the bidder fails to deliver the material, then the <b>EMD/SD</b> shall be forfeited.



#### **ACCEPTANCE BY THE BIDDER**

I/We hereby certify that I/We shall abide hereby the terms and conditions and the Annexures of this limited quotation.

#### Signature & Seal of Vendor with Date

For any details / clarifications regarding could be obtained from Stores and Purchase Section on all working days during 10 AM to 5 PM.

For further detail related to Technical specifications kindly contact **Dr.N.SAMSUDEEN** (Purchase initiator) **Chemical Engineering**, samsudeen@nitt.edu, 0431 250 3100.

(NB: Mention the Contact Number / E-mail on the cover. Any change in the date, time and venue of the tender opening will be informed to the bidders through telephone / E-mail)

**Enclosures:** 1) Specifications of the equipment Annexure – I

2) Price Format Annexure - II

3) EMD Return Format Annexure – III

4) Bank Mandate Form Annexure – IV



#### **DEPARTMENT OF CHEMICAL ENGINEERING**

**Annexure-I** 

# **Specifications of the Equipment**

Ref: NITT/F.NO.056/CAPEX/2024-25/CHE

Date: 28-10-2024

Spe	: 28-10-20		
3p	Specification of the Supplier		
1. Type of reactor:	Biomass Pyrolysis Reactor	Model	
2. FURNACE STRUCTURE			
Model	Batch type 5 Kg Electrical furnace		
Useful volume	As per the customer requirement suitable for	(No hand writter	
	5kg material in continuous mode. (250 mm dia		
	x 300 mm height)		
Shell Construction	<b>Double Wall</b> High quality fabrication of M. S.		
	Body and M. S. Angle's structure with proper		
	stiffeners and neat <b>powder coat painting</b>		
Insulation	High quality mechanically pressed zirconia fiber		
Skin Temperature	Double wall structure & special air circulating		
	fan will be provided to maintain the skin		
	temperatures just above ambient		
Main chamber	made up of Inconel 600 grade		
Material feeding	manually		
3. GAS AND TAR COLLECTION			
Gas system	Chamber is capable of working in controlled		
	atmosphere. And provisions are available to		
	suck the gases produced in the reaction for		
	further processing.		
Flow rate of gas if required	Special rotometer 0-10 ml/min		
Gas cylinder	not in scope		
Tubing	6mm		
Tar collection	container at the end of the reactor will be provided.		
4. HEATING SYSTEM			
Heating elements	APM grade Kanthal (Melting Temp 1450°C)		
Operation	Three phase / 230V/AC	-	
Maximum Power	9 kW		
Maximum temperature	1000°C		
Working temperature	1000°C		
Electrical line requirement	32A – MCB has to arrange by the customer		
5. CONTROL SYSTEM			
Temperature control	TAIE (18x8=144 segment) Microprocessor		
	based PID programmer cum Digital		



	Temperature controller cum Indicator (Imported) Ramp / Heating & Cooling
Temperature sensor	'K' type thermocouple (Chromel / Alumel)
Accuracy	±1°C
Power control	through the phase angle controlled thyrister
	(Thyrister block imported from SEMIKRON,
	ITALY)
Indications	a) Ammeters b) Mains Indicator c) Output
	Indicator
Control switches	Mains on, out put on
6. CONDENSER UNIT	
Condenser unit	Glass with bulb condenser for super cooling
Oil collector	Two neck round bottom flasks with retort
	support
Condensing stage	3 stage condensation unit is required.
7. VACUUM PUMP	
Vacuum pump	Rotary type vacuum pump is available to pull
	the gases from the reactor to the condenser
	unit.
Capacity	240 liters
Vacuum pump capacity	760Hg
8.WATER COOLER & ACCESS	ORIES
Water chilling unit	A chiller unit to chill the water to circulate the
	SS fittings
Capacity	50 liters tank capacity
Temp controller	Automatic on/off Digital temperature
	controller with set temperature
Cooling	Automatic cooling on/off facility
Working temp range	10°C
Water circulation	10lit/min
Wheel mounting	The water chilling plant is constructed with
	the wheel to move the equipment easily
Switches	Independent control for chilling plant and
	water circulation pump

1.	
2.	



S.No	Other requirements related to the equipment	NITT Requirement	Supplier commitment
1.	Installation required	Yes	
2.	Warranty (in Month)	12 months	
3.	Comprehensive AMC required	Yes	
4.	Delivery Period (Weeks)	4-7 Weeks	
5.		Shipment terms	At NIT-T
6.	Performa	ance Security in %	3%
7.	Payment Terms 100% Payment after satisfactory delivery/Installation		
8.	EMD	Amount (2 to 5)%	Rs.5,400/-

### Signature & Seal of Vendor with Date

#### Note:

Specification of the Supplier should be given in detail, single word confirmation like Complied / No / same will be treated as non - responsive Bid and summarily rejected.

Proof for the supplier's specification must be enclosed along with the quotations. (catalogue, brochure, and product website link if any)



#### DEPARTMENT OF CHEMICAL ENGINEERING

**Annexure- II** 

#### PRICE BID FORMAT FOR BIDDERS

Quotation reference No. & Date: NITT/F.NO.056/CAPEX/2024-25/CHE

Bidder's Offer No. & Date:

S. No.	Description of item	Unit (Set / No)	QTY	Rate / Qty in Rs.	(	GST in R	S.	Total Value + GST in
				(exclu ding GST)	SG ST	CGST	IGST	Rs.
1.	Supply portion (The price indicated shall be exclusive of all accessories, spares etc. as given in the scope of supply)	Nos	<u>01</u>					
2.	Other accessories / spares etc. as given in scope of supply (Individual item-wise break-up price shall be attached as an annexure to this price bid format.)							
3.	Installation and Commissioning (extra, if any)		No					
4.	Packing & Forwarding charges (extra, if any)							
5.	Freight & Transit insurance charges, extra, if any							
6.	Total price							
7.	Value of Annual Maintenance Contract							
8.	Net cost to be paid by NIT-T							

Signature & Seal of Vendor

Note: The price quoted should be in Typed format only as per the above form. Hand written quotes will be rejected. No row shall be left blank, Kindly mention NA in case the item is "Not Applicable". If this format is not used or any column is left blank, then the bid will be rejected. AMC Value will not consider for arriving L1 bidder.



# (TO BE PRINTED IN LETTER PAD OF THE FIRM)

# **EMD Returning Form**

То
The Director
National Institute of Technology,
Tiruchirappalli – 620 015

Sub: Returning EMD amount

Sir / Madam,

Our firm has participated in the tender / quotation enquiry No mentioned below and produced the EMD amount through SBI collect, details are given below.

It is requested to return the EMD amount to our firm after completion of the purchase to the below mentioned Bank account.

Account Name	
Bank Account Number	
IFSC code	
Bank	

Signature with Seal and Date



### (TO BE PRINTED IN LETTER PAD OF THE FIRM)

Annexure – IV

#### MANDATE FORM FOR ELECTRONIC FUND TRANSFER/RTGS TRANSFER

То								Date: / /									
The Director, National Institute of Technology, Tiruchirappalli – 620 015, Tamil Nadu																	
Sub : Authorization for release of payment / dues from National Institute of Technology, Tiruchirappalli through Electronic Fund Transfer/RTGS Transfer.																	
Name of the Party / Firm / Company / Institute :																	
2.	Address of the P	arty								:							
3.	City			_Pii	n Co	ode_			nt / dues from National Institute of h Electronic Fund Transfer/RTGS  ute : : nch Name: nch Code:								
4.	E-Mail	Mobile															
5.	Permanent Acco	ent Account Number															
6.	6. Particulars of Bank:																
	Bank Name:		Branch Name:  Branch Code:														
	PIN Code:							Branch Code:									
	IFS Code:(11 digit alpha numeric co																
	Account Type	Sa	Savings					Current					C	Cash Credit			
	Account Number	er:															
				<u> </u>					<u>                                     </u>			<u> </u>		<u> </u>			
					DE	CL	4R/	ATIC	N								
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P	lace:		Da	te:													
	Signatu			-				rized	d Si	gna	itor	y of	the	e Pa	ırty		