TATA INSTITUTE OF FUNDAMENTAL RESEARCH, HYDERABAD

An Autonomous Institution of the Department of Atomic Energy, Government of India (A Deemed University)

Plot No.36/P, Gopanpally Village,Serilingampally Mandal,Ranga Reddy District. Hyderabad,Telangana, India.PIN 500 107

, 0.hone: 040-20203020, Email: jrathna@ tifrh.res.in

Limited Tender

ENQUIRY

Ref: TIFR/PD/CA24-69/240898 October 08, 2024

1. M/s. INKARP INSTRUMENTS PVT LTD (IIPT)
2. M/s. SUDHA ANALYTICALS (SUDH)
3. M/s. VERDER SCIENTIFIC PRIVATE LIMITED (VDRS)

Dear Sirs

Please let us have your **Quotation** for the following:

S.No.	Item Code	Description	Qty	UOM
1	LCQFN000008	Horizontal, three zones, gradient, split tube furnace connected with turbomolecular pump for operation in vacuum and inert atmosphere with the attached specifications	1.00	NO

NOTE :

Please submit the quotation as per specifications along with local content certificate as per Annexure - A.

Please mention your GST Registration numbers on the quotation, proforma Invoice and Bills.

Quatation should indicate make, delivery period, guarentee/warranty exact taxes applicable, etc.

The payment will be made only after delivery of the supply, satisfactory installtion, commissioning and performance of the item/equipment. No Advance payment will be made except in case of furnishing valid Bank Guarantee from any nationalized/scheduled bank the B. G. shall be valid till the complete delivery is made at the site.

Time is the essence of the contract. The delivery of Goods or performance of the Services shall be made by the Supplier in accordance with the time schedule specified in the Purchase Order/Contract.

If the Supplier fails to deliver any or all of the Goods or to perform services within the period(s) specified in the Purchase Order/Contract, the Purchaser shall, without prejudice to other remedies under the Contract, deduct from the Contract Price, as penalty, a sum equivalent to 0.5% per week and the maximum deduction is 5% of the contract price.

Quotation sent by hand delivery / courier are to be deposited in the Tender Box kept at the Main Gate after obtaining stamp, date and signature of the Security Officer.

Quotation should be submitted in sealed envelope duly superscribing our enquiry reference and due date.

Due Date for submitting your offer is 13/11/2024.

Yours faithfully

J.RATHNA
Administrative Officer (D)

Copy to: **Prof. / Dr. / Mr. / Mrs. / Ms. / Shri / Smt. PABITRA KUMAR NAYAK (TCIS-23X104)**
Your Indent Req. No.PNA0240087 Dated:07/10/2024 refers.

Remarks: **The potential vendors are**
(1) Inkarp Instruments Pvt Ltd
1-2-45/1, Street No. 2, Kakateeya Nagar Colony,Habsiguda, Hyderabad ¿ 500007

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Due Date for submitting your offer is 05/11/2024.

Yours faithfully

T.I.F.R. HYDERABAD-500 107

J.RATHNA
Administrative Officer (D)

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Ref no : TIFR/PD/CA24-69/240898

Sr. No.	Item Description	Qty.	UOM	Rate per unit	Item wise GST %	Total Cost including GST (In INR)
1	Horizontal, three zones, gradient, split tube furnace connected with turbomolecular pump for operation in vacuum and inert atmosphere with the attached specifications	1	NO			
	Total					
	Freight/Transportation charges, if any					
	Service/Labour charges, if any					
	Any Other charges					
	Final Total in figures					
	Final total in words					

Enquiry Ref. No. TIFR/PD/CA24-69/240898

Horizontal, three zones, gradient, split tube furnace for operation in Vacuum and Inert Atmospheres.

1.	Temperature	Maximum Temperature:1200 °C. Maximum continuous operating temperature:1100 °C.
2.	Heating Elements and thermocouple	High quality FeCrAl free radiating wire heating elements embedded within the insulation of the furnace body, specifically designed to provide a temperature gradient along the length of the heated zones. Heating elements resulting in excellent and unsurpassed temperature uniformity along the entire heated length. Fast heat-up and cool-down rates. Thermocouple: Type N Thermocouple.
3.	Insulation	High quality thermal insulation designed for longevity, ensures low energy consumption and low external case temperature.
4.	Number of heated zones	Three independently operated heating zones.
5.	Heated zones and unheated zone barriers	Number of Heated zones :3. Length of each heated zone :150 mm or more. Number of unheated zone barriers:2. Length of each unheated zone barriers: 75 mm or more.
6.	Furnace type and dimensions	Furnace: Compact, horizontal, and split type. Furnace body must be split into two halves and hinged at the rear; pneumatic dampening struts at either end provide a smooth opening action. Furnace body external dimensions: H x W x D in mm 575 ± 5 x 800 ±5 x 475 ± 5. Control module external dimensions: 230 ± 5 x 790 ± 5 x 480 ± 5. Weight of the furnace: ≤ 60 kg
7.	Furnace design and configuration	Flexible design to use a variety of tube diameters with the use of tube adapters. Specifically designed to provide a temperature gradient along the length of the three heated zones. Configuration to include a 2metre cable (including plug and socket) between the furnace body and control box.

8.	Temperature controllers and thermocouples.	Programmable temperature controllers to be fitted in three heated zones - 3 Nos. One programmable temperature controller and one thermocouple to be fitted in each heated zone. Temperature controller with 1 program and 24 segments. Each segment can be set as ramp, step or dwell and can be configured to control two solenoid valves/relays. Ethernet communication is fitted in temperature controller as standard and certified for cybersecurity communications robustness.
9.	Work tube package for furnace operation in inert gas atmosphere and Vacuum atmospheres	Work tube package suitable for furnace operation of furnace in inert gas atmospheres and Vacuum atmospheres should include the following items. • Quartz material work tube with 60 mm outer diameter,55 mm inner diameter & 1050 mm or more length – 1 No. • Radiation shields:2 Nos. • Work tube end seals as given below: NW16 Vacuum flange + Thermocouple gland: 1 No. End plates: 2 Nos. NW25 – 1 No, Compatible with low vacuum pump package NW40 for 60 mm work tube outer diameter – 1 No, Compatible with high vacuum pump package. • Probe thermocouple access: 3 mm Diameter gland and blanking plug.
10	Automatic Gas Control Unit	Gas Control module designed to work in combination with work tube package should include the below. • Gas inlet with 6 mm outside diameter push in fitting. • Electrically operated valve • Pressure relief valve • Pressure gauge • Flow meter with flow adjustment knob • Non-return valve • Fitting and pipe to connect an additional inert gas package • Gas outlet: 6 mm braided hose with 6 mm union • Dimensions: H x W x D in mm: 245±5 x 130±5 x 210±5
11	Tube supports	Mounting of the furnace in horizontal configuration along with work tube supports to be quoted.

12.	Temperature Gradients	Zone 1: 1100 °C, Zone 2: 950 °C, Zone 3: 800 °C. Zone 1: 1100 °C, Zone 2: OFF, Zone 3: 400 °C. Above temperature gradients are to be achieved in 3 zone gradient tube furnace. Graphical documentation confirming above data and other graphs showing gradients at different temperatures up to 1100 Degrees C need to be produced along with technical literature.
13.	Electrical Power and Maximum Power (W)	230 V, 50 Hz, Single Phase and maximum power: 2000 W
14.	TMP Based Vacuum Pump Integrated to the tube furnace	Suitable TMP Based Vacuum Pump (make: Pfeiffer Vacuum or Leybold GmbH) along with Rotary Vane Pump including all accessories to operate the TMP.
15.	Vacuum condition	Should reach 10^{-6} mBar.
16	Warranty	Option of extended Warranty beyond the standard 1 year

Annexure - A

Certificate for Local Content

*We [name of manufacturer] hereby confirm in respect of quoted item(s) that Local Content is equal to or more than 50% and come under 'Class-I Local Supplier' Category. As being 'Class-I Local Supplier', we are eligible for Purchase Preference under 'Make in India' Policy vide GoI Order No.P-45021/2/2017-PP (B.E.-II) dated 15.06.2017 (subsequently revised vide orders dated 28.05.2018, 29.05.2019 and 04.06.2020)

OR

*We [name of manufacturer] hereby confirm in respect of quoted items(s) that Local Content is more than 20% but less than 50% and come under 'Class-II Local Supplier' Category.

The details of the location (s) at which the local value addition made is /are as under:

1.....

2.....

3.....

*Strike out whichever is not applicable

Date: Seal & Signature of the Bidder

NOTE:

- Self-certification that the item offered meets the minimum local content (as above) giving details of the location(s) at which the local value addition is made in case the bidder wishes to avail the benefits under the make in India policy, if applicable.
- In cases of procurement for a value in excess of Rs. 10 crores, the local supplier shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content to avail the benefits under the make in India policy, if applicable.