INDIAN INSTITUTE OF TECHNOLOGY GOA

At Goa Engineering College Campus Farmagudi, Ponda, Goa 403401 E-mail: <u>purchase@iitgoa.ac.in</u>

GSTIN: 30AABAI1653D1ZF PAN: AABAI1653D TAN: BLRI08261B

Enquiry No: IITGOA/2019-20/049

Date: 22/01/2020

IIT Goa invites sealed quotations in two bid form for the supply of below mentioned items.

Sl. No.	Description of Item	Qty
1	High Pressure Liquid Gas Pump	01 No.
	(Detailed Specifications Attached)	
2	Optical Measurement Setup Compatible with Navitar Zoom Lens	01 No.
	(Detailed Specifications Attached)	

Terms and conditions:

- 1. Quotation must be valid for at least 90 days.
- 2. The GSTIN should invariably be mentioned in your offer.
- 3. Kindly attach a compliance certificate along with the technical quote.
- 4. Prices:

I) For Import Supplies:

- a) It is mandatory to quote prices in FOB basis only.
- b) In case of multiple options of same product, bidders are requested to quote only one best option and not multiple options.
- c) Payment terms: 90% payment by letter of credit and balance 10% will be paid by wire transfer after satisfactory installation and commissioning.

II) For Indigenous Supplies:

- a) In case of multiple options of same product, bidders are requested to quote only one best option and not multiple options.
- b) Payment terms: Within 30 days after the delivery and installation of the item at IIT GOA.
- 5. Delivery and installation should be made within 6 weeks of getting a confirmed order.
- 6. The suppliers shall provide the banking details along with their quote on their letterhead duly signed and stamped.

- 7. Quotations shall be submitted in two parts;
 - Part I (Technical) should contain all the technical details and specification of the product. It should contain unpriced bid along with terms and conditions, compliance certificates, proprietary certificates (if applicable), any other certificates/details etc. This envelope should be marked as "Technical Bid"
 - 2) **Part -II (Financial)** The financial bid of the above item should be in a sealed envelope marked as "Financial Bid" and should contain financial terms and conditions.
- 8. IIT Goa reserves the right to accept or reject any or all the bids without assigning any reason in public interest.
- 9. The successful bidder has to submit a Performance Guarantee Bond for 5% of the Purchase Order value and valid till one year OR up-to warranty period whichever is later from the date of issue of Purchase Order. Performance Guarantee Bond may be submitted within 15 (Fifteen) days from the date of order acknowledgment as a successful bidder.
- 10. For any clarification, you may kindly contact Dr. Arindam Das (E-mail: <u>arindam@iitgoa.ac.in</u> and Stores & Purchase Department (email: <u>purchase@iitgoa.ac.in</u>) till 31/01/2020.
- All sealed quotations must reach to the Assistant Registrar (Stores & Purchase), IIT Goa, at Goa College of Engineering Campus, Farmagudi, Ponda, Goa, 403 401 by 17.00 Hrs on or before 12/02/2019.

Sd/-Asst. Registrar (S&P)

FORMAT FOR PERFORMANCE GUARANTEE BOND

(To be typed on <u>Non-judicial stamp paper</u> of the value of Indian Rupees of One Hundred) (TO BE ESTABLISHED THROUGH ANY OF THE NATIONAL BANKS (WHETHER SITUATED AT GOA OR OUTSTATION) WITH A CLAUSE TO ENFORCE THE SAME ON THEIR LOCAL BRANCH AT GOA OR ANY SCHEDULED BANK SITUATED AT GOA. BONDS ISSUED BY CO-OPERATIVE BANKS ARE NOT ACCEPTED.

To, The Registrar, Indian Institute of Technology, Goa Farmagudi, Ponda, Goa – 403401

LETTER OF GUARANTEE

within 15 (Fifteen) days from the date of Order Acknowledgment as a successful bidder.

This Bank further agrees that the decision of Indian Institute of Technology, Goa (Buyer) as to whether the said Tenderer (Seller) has committed a breach of any of the conditions referred in tender document / purchase order shall be final and binding.

Notwithstanding anything contained herein:

1. Our liability under this Bank Guarantee shall not exceed Rs.

(Indian Rupees only).

- 2. This Bank Guarantee shall be valid up to(date) and
- 4. This Bank further agrees that the claims if any, against this Bank Guarantee shall be enforceable at our branch office at situated at (Address of local branch).

Date:

Yours truly,

Signature and seal of the Guarantor:

Name of Bank:

Instruction to Bank: Bank should note that on expiry of Bond Period, the Original Bond will not be returned to the Bank. Bank is requested to take appropriate necessary action on or after expiry of bond period.

Technical Specifications of High Pressure Liquid gas pump and Optical measurement set up

- A. The Automatic High Pressure Liquid gas pump should have following technical Specifications
- 1. Automatic liquid and gas pump to be used with High Pressure Chamber for contact angle, interfacial tension and other droplet based interfacial measurement at 400 Bar pressure or more.
- 2. Pump should have capacity of 250 ml or more.
- 3. Pump should have automatic pressure control function to easily raise the pressure and keep it stable over time.
- 4. Pressure accuracy should be 0.5% of full scale or better.
- 5. Flow rate: 0.001or less to 100 ml/min or more
- 6. Pump should include all the required valves, connectors and tubing for connecting to a High pressure chamber working at maximum pressure of 400 bar or more.
- 7. Pump should be easily coupled with High Pressure chamber (400 bar or more) in future. Quote high pressure chamber separately as an optional item.
- B. The Optical setup should have following technical Specifications
- 1. A modular visualization system for fully computer-controlled for measurement of contact angle, surface and interfacial tension.
- 2. Frame with back light and control electronics and an interface for extra light source and temperature control options.
- 3. Digital video camera with zoom
- 4. Camera cable coming from the camera directly. The camera with the nominal imaging speed of 130 fps or better with a 1984 x 1264 resolution, and up to 3000 fps or better with 672 x 57 or better resolutions.
- 5. Set up should have zoom lens and required attachments compatible with Navitar 12x F mount lens system for visualization.
- 6. USB3 interface to computer.
- 7. software for determination of contact angle by sessile/rising drop method with automatic base line detection ;surface/ interfacial tension by pendant/ rising drop method surface free energy, based on calculation equations: Zisman, OWRK/ extended Fowkes ,Wu,Acid-Base; Equation of State ; Schultz 1,Schultz 2 ;contact angle by the meniscus method" and "fully automatic dynamic contact angle with the needle method. Inbuild liquid and solid library with predefined entries.
- 8. Calibration tools must be included with the set up.

Compatible computer (Laptop or PC with i7 Processor, 16GB RAM and 1 TB memory, MS office) with control software must be included in the quotation.

Both automatic HP liquid gas pump and optical setup should be compatible with each other for interfacing if required in future.

C. Compatible High pressure chamber should have

- 1. viewing window, 400 bar or more working pressure,
- 2. compatible connection or ports to handle gas/liquid from automatic High pressure liquid gas chamber,
- 3. Compatible with manual liquid/gas pump.
- 4. It must be fixable to automatic optical set up (as mentioned above) to carry out contact angle, receding contact angle and other interfacial measurements.
- 5. Pump should have integrated piston/ plunger type manual piston pump to increase the inside pressure.
- 6. Compatible high pressure chamber should be quoted separately as an optional item.

D. Miscellaneous:

- 1. Free installation including demo of handling and safety precautions.
- 2. Must provide a user manual.
- 3. Should have user-friendly menu.
- 4. 5 Years comprehensive warranty. In case warranty is less than 5 years, AMC must be quoted after warranty period is over.
- 5. Bidders must ensure supply of spare parts till minimum of 5 years after warranty period.
- 6. After Sale, Service should be available promptly. Round the clock technical help must be provided to the users.
- 7. International and domestic user list must be provided.
- 8. Additional features/accessories if any that can potentially increase the productivity and safety of the instrument should be quoted separate as optional items.