



# CSIR-Indian Institute of Petroleum

(Council of Scientific & Industrial Research)

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ISO-9001 Regd. Institute

**Dt. 31.05.2022**

## **CORRIGENDUM**

**Tender Notice Ref.: IIP/PUR/1/22-23/11/EOI/GA/AB**

**Tender ID: 2022\_CSIR\_114793\_1**

### **Sub: Corrections in Specification for purchase of Gas Analyser for online usage**

With reference to above tender for EOI of Gas Analyser for online usage, please note that we **have add correct specification as follows :**

#### **Subject: Invitation for Expression of Interest (EOI) for “Gas Analyser System for Online Usage”**

CSIR-India Institute of petroleum (IIP), Dehradun an ISO 9001 Institute is one leading constituent under the council of scientific & Research (CSIR), engaged in R&D work in petroleum refining, natural gas and petrochemicals and contributing towards the creation of the state of the art technology & products. CSIR-IIP has been working on several projects of national importance independently and also in collaboration with well-known Indian organizations.

EOI are invited from reputed firms for supply of “**Gas Analyser System for Online Usage**” for CSIR-IIP, Dehradun the required material properties include one gas analyser with two (02) TCD detectors for precise and kinetic reaction analysis, injectors 1 no split/split less capillary injection port and 2 no heated GSV and required number of valves for online usage for gas phase analysis for permanent gases (H<sub>2</sub>, O<sub>2</sub>, CO, CO<sub>2</sub>, N<sub>2</sub>), H<sub>2</sub>O, C1-C4 hydrocarbon in a single injection. Software should be able to generate a single report for both the detectors for a single injection.

Firms that have carried out similar previously can apply along with documentary evidence for the work done in the past. The firms should also meet the other parameters as given below and required to submit the following information along with their applications:

- a) Name of the firm with constitution /proprietorship detail, etc with the date of establishment/ registration
- b) List of similar works completed in the last seven years as above with testimonials from the department concerned and the details of contact persons.
- c) The firm should not have incurred any loss in more than 2 years during the last 5 years ending 31<sup>st</sup> March, 2022.
- d) List of work in hand giving nature of work, department, and cost, date of start and completion with present progress, and the clients’ contact details.
- e) The certified Balanced Sheet and Profit & Loss account of the firm for the previous two years (2020-2021 and 2021-2022) must be enclosed with the offer.
- f) Please submit articles of Association along with the offer to outline the scope of activities and standing of the firm.

Firms are requested to refer to the ***Order Nos. P-45021/2/2017-PP (BE-II) dt. 15.06.2017 as amended vide order of even number 28.05.2018, 29.05.2019, 04.06.2020, and 16.09.2020 and any subsequent amendments thereto*** issued by Public Procurement Section of DPIIT, Min. of Commerce & Industry, Government of India in their own interest to know about the provisions related to domestic suppliers for participation in open tenders.

Firms may also refer to various other policies / programs of the Govt. related to promoting domestic manufacturing and/or supply

Offers against this EOI containing the technical aspects and contractual terms and conditions of the proposed procurement without a bid price should be submitted in form of E-BIDS through Central Public Procurement (CPP) Portal (<https://www.etenders.gov.in>) and only online offers will be entertained from the registered bidders of CPP Portal. Last date of submission of EOI is **14.06.2022 by 3.00 PM**, and shall be opened on the **15.06.2022 at 3:00 PM**. Shortlisted firms shall be called for making a presentation at a later date.

If the Procuring Entity is of the view that after EoI stage, there is likelihood of further participation by many more bidders and to avoid getting trapped into a legacy technology, the second stage bidding may not be restricted only to the shortlisted bidders of EoI stage. In the second stage, normal OTE/GTE bidding may be done.

If any information furnished by the applicant is found incorrect at a later stage, it shall be liable to be debarred from tendering/taking up of work in CSIR. CSIR-IIP reserves the right to verify the particulars furnished by the applicant; independently. CSIR-IIP reserves the right to reject any prospective application without assigning any reason.

**Technical specifications for “Gas Analyser System for Online Usage” for CSIR-IIP , Dehradun are as follows.**

The material would include the following properties:

1	Item Name :	Gas analyser system for online usage
		<p><b>Technical Specifications:</b>            One Gas analyser with two(02)TCD detectors for precise and kinetic reaction analysis, Injectors 1 no split/split less capillary injection port and 2 no heated GSV and required number of valves for online usage for gas phase analysis for permanent gases (H<sub>2</sub>, O<sub>2</sub>, CO, CO<sub>2</sub>, N<sub>2</sub>), H<sub>2</sub>O, C1-C4 hydrocarbon in a single injection. Software should be to generate a single report for both the detectors for a single injection.</p> <p><b>Performance</b>            Highly precise retention time repeatability (&lt; 0.0008 min)            Area repeatability (&lt;0.5%RSD), full EPC for all inlets and detectors.</p> <p><b>GC Flow Control</b>            Fully PC control system, highly precise electronic pneumatic control (EPC) or electronic flow control (EFC) or pneumatic pressure control (PPC) or digital pressure control (DPC) for injectors, detectors and auxiliary gases controllable through input LCD or GC software. The precise pneumatics and temperature control must be evident with chromatographic performance of the instrument.            Pressure set point of at least 0.01 psi. Flow or pressure set point parameter for on each inlet/injector or detector should be displayed on screen. Automatic control of split vent, automatic setting of split flow rates and split ratios by software. Alarm facility for heater, sensor and gas flow faults.</p> <p><b>GC Oven</b>            Temperature range ambient+5°C to 400°C .            Temperature set-point resolution should be 0.1°C.            Maximum achievable temperature rampup to 120°C per minute or better.            Multi ramp (more than 7) temperature programming and plateaus with high accuracy.            Fastest cooling down rate for oven (less than 5 minutes for cooling from 400 to 50 °C). Ambient rejection: 0.001°C per 1°C</p>

<p><b>Inlet/Injector and valves (at least one 6 and one 10 ports)</b>  One capillary split/split less (S/SL) inlet and one heated (150°C or better) gas sampling valve (GSV).  Temperature range: 50°C to 400°C or better.  Split ratio of 7500:1 or more in S/SL.  0-100 psi or better operation with 0.1psi increments  Must be able to connect capillary columns with internal diameter ranging from 0.1 to 0.53 mm.</p> <p>All injection ports should be independently heated.  Multi-port automatic heated gas sampling valve for on-line analysis with 0.25, 0.5ml and 1 ml loop using GC Transfer Line from a micro reactor (to reduce high pressure to ambient pressure)</p> <p><b>Detectors</b>  Thermal Conductivity Detector (TCD) compatible with ¼ and 1/8 inch columns  Maximum temperature of TCD should be 400°C or better  Maximum detection limit should be minimum 500 pgtridecane /mL or 300pg/mL butane with He carrier.  Linear dynamic range should be 10<sup>5</sup> or better  Filament protection: standard</p> <p><b>Data acquisition and analysis</b>  Latest windows operating system supported advanced user friendly data analysis/acquisition software equipped with quantitative data analysis feature (including original CDs with license numbers). Software should provide a single and compiled report for both the detector for a single injection. The system must be capable of carrying out self-diagnostics in case of errors.</p> <p><b>Installation, Warranty, AMC and Training</b>  Necessary pre-installation advice should be sent immediately before shipping the instrument.  At least 12 months comprehensive warranty from the date of commissioning.  Onsite comprehensive user and maintenance training.  Complete demonstration of installation checkout specifications failing which instrument will not be accepted.  Detailed circuit diagrams, service and operation manuals.  A certificate of the principal firm be included stating the instrument spares and service will be available 10 years after the supply.</p> <p><b>Terms and conditions for instrument</b>  The supplier must provide installation, commissioning and complete training to users without any additional cost and supply relevant operating and servicing manuals in printed and soft formats.  The supplier must demonstrate that they have appropriate setup and capability to provide after sales technical support and timely servicing of the instrument. In addition, list of existing users of similar instruments from other institutes should be provided along with the availability of trained and efficient service engineers.  The tender document MUST enclose valid standard specification documents from the company and every specification must be a part of that standard document.  The valve diagram must be supplied with the tender.</p>
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Only online quotations will be entertained from the registered bidders of CCP Portal **and the new bid submission date is on or before 14.06.2022 at 15:00 hours (IST)** and shall be opened on **15.06.2022 at 15:00 hours (IST)**.

All other tender terms & conditions remains same

(Stores & Purchase Officer)  
For & on behalf of CSIR