25-11-2025

Minutes of Pre-Bid Meeting

फाइल क्र. : PUR/EQP/75/(2025-26)

विषय: **Fully Automated Chemisorptions Analysis.**

A Pre-bid meeting regarding the procurement of the instrument was held on 25-11-2025 from 2:30 PM onwards in the conference room.

Dr Venkata Palla External Domain expert attended the meeting through online mode.

Representatives of two instrument manufacturing companies attended the meeting and their details are given below-

1) M/s Anton Parr India Pvt Ltd, Gurugram, represented by Mr. Anurag Maurya, Mr Sushant Jadav, Dr Rishi Gupta

2) M/s Verder Scientific Pvt.Ltd. Ghaziabad , represented by Mr. Shailender Pal Singh and Mr Roshan Desouza

During pre-bid meeting firm has raised following queries that have been replied by the committee member:

M/s Anton Paar

S/No.	Annexure Points	Request for amendment	Response
1	Introduction Break through curve measurement	To Remove: breakthrough curve measurement	No Modification suggested
2	Point no A (11) Vapor generator option should be accessible for future studies and supplied with the system	To Remove: "Provision should be available for field upgradation in future with vapor chemisorption."	No Modification suggested
3	Point no A(4) The system should be provided with suitably designed quartz tube to accommodate various catalyst volumes and sizes for use up to 1100 ^{0}C. The vendor should supply at least 30 quartz sample tubes.	Sample tubes for Chemisorption To Reduce Qty- The vendor should supply at least 5no. quartz sample tubes.	No Modification suggested
4	Point no A (7) System compatibility with He, Ar, N_2, O_2, H_2, CO, CO_2, NH_3, N_2O, NO, methane, **SO_x**, and other corrosive and non-corrosive gases and their mixtures as per requirement.	Injection gas – To Remove: Sox	Modified to - System compatibility with He, Ar, N_2, O_2, H_2, CO, CO_2, NH_3, N_2O, NO, methane and other corrosive and non-corrosive gases and

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			their mixtures as per requirement.
4	Point no A (5) I. The system should be having an electrical furnace to run automatically the temperature programmed experiment from room temp to 1100°C or better. II. High-temperature furnace should provide quick and accurate ramp rates to the desired temperature with excellent temperature control and repeatability ± 1 ^{0}C, III. <u>The system should be provided with rapid cooling attachment with Cryo. cooler with **25 L** liquid Nitrogen Storage capacity.</u>	To Remove: The system should be provided with rapid cooling attachment with Cryo. cooler with 25 L liquid Nitrogen Storage capacity	Modified to – I. The system should be having an electrical furnace to run automatically the temperature programmed experiment from room temp to 1100°C or better. II. High-temperature furnace should provide quick and accurate ramp rates to the desired temperature with excellent temperature control and repeatability ± 1 ^{0}C, III. The system should be provided with rapid cooling attachment with Cryo. cooler with **10 L** or more liquid Nitrogen Storage capacity.
6,7	Point no A (8) I. <u>The system should have 8 or more gas inlet ports, Including two ports for corrosive gases.</u> II. Provision should be available to expand the number of gas inlet lines.	I. The system should have 8 or more gas inlet ports, Including two ports for corrosive gases. 5 gas inlets (3 adsorptive/ 1 He/ 1 calibration) V. Minimum 1 MFC should be available in the system one each for Carrier,	No Modification suggested

	III. At least one mixed gas line should be provided in the main instrument with provision to upgrade with more mixed gas lines. IV. The system should be equipped with mass flow controllers. V. Minimum 3 MFC's should be available in the system one each for Carrier, Pretreatment/Pulse and Mix gas lines.	Pretreatment/Pulse and Mix gas lines.	
8	Point no. B (14) Firm must submit a conceptual P&ID & flow diagram.	To Remove: Compulsory clause- III. Firm must submit a conceptual P&ID & flow diagram.	No Modification suggested

M/s Verder Scientific

S/No.	Annexure Points	Request for amendment	Response
1	Point no A (5) I. The system should be having an electrical furnace to run automatically the temperature programmed experiment from room temp to 1100°C or better. II. High-temperature furnace should provide quick and accurate ramp rates to the desired temperature with excellent temperature control and repeatability ± 1 ^{0}C, III. The system should be provided with rapid cooling attachment with Cryo. cooler with **25 L** liquid Nitrogen Storage capacity.	Request to change the volume of Cryo Cooler from 25 L to 10 L or more.	Modified to – I. The system should be having an electrical furnace to run automatically the temperature programmed experiment from room temp to 1100°C or better. II. High-temperature furnace should provide quick and accurate ramp rates to the desired temperature with excellent temperature control and repeatability ± 1 ^{0}C, III. The system should be provided with rapid

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			cooling attachment with Cryo. cooler with **10 L** or more liquid Nitrogen Storage capacity.
2	Point no A (11) Vapor generator option should be accessible for future studies and supplied with the system	Request to " Instrument having facility to add accessories w/o making any hardware change for Vapor generator for future studies and upgradation.	Modified to – Vapor generator option should be accessible for future studies

Other Technical Specification and terms and condition of the tender document will remain same.

Dr. V. C. Palla