

CSIR- NATIONAL PHYSICAL LABORATORY

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From: Director, CSIR-NPL

No. 14-VII/JP(3061-OTE)25PB/T-29

Dated:31.07.2026

CORRIGENDUM

With reference to NPL's Open Tender ID: **2026_CSIR_284241_1** for "**High Temperature and High Pressure Reactor**". All the prospective bidders are hereby informed that some changes have been made in the technical specification of captioned tender. Revised specifications are as follows:

Original Specifications	Final Specifications
As tendered	Attached as Annexure I

Revised Technical specifications (Annexure-I) is also ATTACHED with this Corrigendum. Accordingly, all the interested bidders may submit their Offer as per revised technical specification.

Please also note that bids submitted without taking these changes into consideration will be rejected summarily.

All other terms will remain the same. The same is also available on CSIR-NPL official website <http://www.nplindia.org> under Tender link.


Sr. Controller of Stores and Purchase

FORM TO BE FILLED BY IO WHILE CONVENING PRE-BID MEETING OF TSC.

File No.14-VII/JP(3061-OTE)25PB/T-29

Date: 21.07.2026

Pre-bid Meeting (To be typed clearly by the I/O)

Name of Indentor: Dr.Jyoti Pokhariyal

Indent No. NPL26122025MLP19093250

Item Description High temperature High Pressure Reactor

No. of Budgetary Quotes 02

(1) A pre-bid meeting of TSC was held on 21.07.2026.

(2) Following queries were raised by participating Bidders:

Name of the Firm	Queries Raised	Remarks, if any
Orbit Technologies Pvt Ltd	No queries received	--
Scientific Research Instruments Company Pvt Ltd.	D (i) Pressure Gauge, Pressure Measurement Minimum 3.5 inch or higher size and Pressure transducer for digital display.	
	E (i) Motor Speed Ranges 0–1700 RPM or better	

Indentor's recommendation

1. The comments, as received from bidders during PBC, and our response is as follows:

Tender Specification and its number	Comment of bidder	Response of Indentor (Accepted/ Not accepted)	Revised specification (If any)	Justification for non-acceptance
D (i) Pressure Gauge, Pressure Measurement Minimum 3.5 inch or higher size and Pressure transducer for digital display.	<u>As per Scientific Research Instruments Company Pvt Ltd.</u> Point No. D (i) Pressure Gauge, Pressure Measurement Minimum 3.5 inch or higher size and Pressure transducer for digital display. Changes Required: Pressure gauge minimum 2.5 inch or higher size	Accepted	D (i) Pressure Gauge, Pressure Measurement Minimum 2.5 inch or higher size and Pressure transducer for digital display.	NA
E (i) Motor Speed Ranges 0–1700 RPM or better	Point No. E (i) Motor Speed Ranges 0–1700 RPM or better Changes Required: 50–1700 RPM or better	Accepted	E (i) Motor Speed Ranges 50–1700 RPM or better	NA

Final recommended specifications are as attached at Annexure 1 and signed by I/O:

Corrigendum to Tender may be issued/ may not be issued.

Recommended Revised Date of Tender submission (if any) is _____

The specifications are generic and broad based.

Submitted to TSC for necessary approvals.

FORM TO BE USED BY TSC FOR FINALISING PRE-BID MINUTES

File No. 14-VII/JP(3061-OTE)25PB/T-29

Date:21.07.2026

TSC Minutes (To be typed clearly by the I/O)

Based on the Pre-bid meeting and recommendation of I/O, following changes have been made in the specifications:

Original Specifications	Final Specifications
Point No. D (i) Pressure Gauge, Pressure Measurement Minimum 3.5 inch or higher size and Pressure transducer for digital display	Point No. D (i) Pressure Gauge, Pressure Measurement Minimum 2.5 inch or higher size and Pressure transducer for digital display.
Point No. E (i) Motor Speed Ranges 0–1700 RPM or better	Point No. E (i) Motor Speed Ranges 50–1700 RPM or better

The file is forwarded to Purchase Section for uploading the final specifications and TSC minutes on the website and CPPP Portal.

Declaration: We hereby declare that we have no conflict of interest with any of the bidder in this tender.

Technical Specification for High Temperature and High Pressure reactor

High Temperature High Pressure Reactor	The Bench Top stirred reactor system with vessel with Fixed Head design Construction.
A. General & Design Requirements	
(i) Capacity	600 ml or higher
(ii) Design	Fixed head construction with bench-top mounting facility
(iii) Model Status	Standard model from current serial production; customized/one-off models not acceptable
(iv) Overall, Height	Reactor with stand 36-38 inches or better
B. Material of Construction (MOC)	
(i) Reactor Vessel, Head, Magnetic Drive & Wetted Parts	The reactor vessel should be made from SS 316 with no welding (machined from solid bar stock) Certificate must be attached
(ii) Split rings	The Split rings should be machined from a solid stock bar of 4140 high strength steel
(iii) External valves and fittings material	It should be constructed of T316SS
(iv) valve connections size	All valve connections on the head should be 1/8" or 1/4" NPT Male/Female
C. Pressure & Temperature Requirements	
(i) Operating Temperature range	Minimum 50°C Maximum 300°C or higher
(ii) Maximum operating pressure	200 bar or higher
D. Vessel Closure & Safety Features	
(i) Closure Type	Split ring closure
(ii) Tightening System	Provision for 6 bolt or special design for hand tightening.
(iii) Gasket	PTFE/FFKM or better whichever can withstand 300°C
(iv) Pressure Gauge, Pressure Measurement	Minimum 2.5 inch or higher size and Pressure transducer for digital display
(v) Safety Device, Gas Handling, and Sampling	Rapture disc, Gas inlet valve, Liquid sampling valve on common dip tube
(vi) Cooling	Serpentine cooling coil
(vii) Temperature sensor	Fixed K-type thermocouple/PT100
E. Stirring System & Magnetic Drive	
(i) Speed Measurement	Tachometer sensor with optical wheel/Hall sensor
(ii) Feedback Control	True closed-loop feedback control
(iii) RPM Calculation	VFD-based RPM calculation not acceptable
(iv) Viscosity Handling	System must handle changing viscosities
(v) Maximum torque	16 in-lb
(vi) Max Speed Enhancement	Provision to reach 1700 RPM at 9 in-lb torque
(vii) Motor Speed Ranges	50–1700 RPM or better
(viii) Documentation	Proof for shaft diameter and speed range to be submitted
(ix) Technical Evidence	Schematic/picture and working description of tachometer system required

G. Heating, Cooling & Control System	
(i) Heater	External Electrical Heating device
(ii) Temperature Controller	Microprocessor-based programmable PID
(iii) PID Features	Auto-tuning, ramp-soak programming, minimum overshoot
(iv) Display Modules	Stirring speed, digital pressure, temperature
(v) Temperature Control	Vessel outer skin temperature sensing & control/Process temp control by sample temp measurement by using PT-100 sensor inserted through SS dip tube
(vi) Cooling Control	Automatic coolant/tap water flow control
Warranty Terms	1 year standard warranty from the date of the installation

The Vendor should comply below Qualification Criteria and should provide documentary evidence along with techno commercial Bid:

1. Manufacturer must have ISO certification for overall quality assurance and management compliance aspects
2. Manufacturer must have CE/PED certification for design and manufacture of pressure reactors and assemblies for laboratory applications
3. OEM should have minimum 10 years' experience in design, manufacturing & selling high pressure and High temperature reactors.
4. Vendor should submit the documents of minimum 05 past purchase order copies or more installations of reactor systems with a pressure and temperature ratings 200 bar @ 300 deg C or above given in the specifications from CSIR labs/government /PSU/ Semi Government/private customers in the last 5 years.
5. Detailed schematic diagram, service, and operation manuals should be provided by vendor.