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From: Director, CSIR-NPL
No. 14-VII/BG(3059-GTE)25PB/T-151 Dated:04.02.2026

CORRIGENDUM

With reference to NPL's Global Tender ID: **2026_CSIR_826362_1** for "**Thermal Conductivity Instrument**". 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.in 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/BG(3059-GTE/25 PB **Date: 27-01-2026**

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

Name of Indentor: **Dr. Bhasker Gahtori**

Indent No.: **PR4031692025**

Item Description: **Seebeck Instrument**

No. of Budgetary Quotes: **Two**

(1) A pre-bid meeting of TSC was held on **27-01-2026**

(2) Following queries were raised by participating Bidders:

Name of the Firm	Queries Raised	Remarks, if any
1. NETZSCH Technologies India Pvt. Ltd.	Point No. 6 - Infrared detector head, with InSb/any compatible sensor, Liquid Nitrogen (LN2) cooled along with Liquid Nitrogen (LN2) 'DEWAR' having capacity for 24 hours operating time. **Changes Required:** A Dewar of capacity 20 Ltr or better for keeping LN2 should be included in the Offer to cool the Detector Point No. 14 - The required sample carrier/sample support with cap/cover should be made up of high temperature stable materials (Greater than operating temperature) Ø 12.7 mm round samples: 4 Nos,,10 mm x 10 mm square samples: 4 Nos, ·Ø 8mm round samples 04 Nos, Ø 6mm round samples 04 Nos, Should also supply the blind cover/blank caps: 4 Nos for each geometrical shape and size for closing the openings in the sample tray if there is no sample in that designated position. One set additional sample holders compatible/fit with the supplied instrument sample chamber and detector should be provided for each Powders, Paste, Resins, Lamellar, and Liquid samples. **Changes Required:** we request to please mention it clearly are you asking for a compartment or a Box to keep the sample holders and detector or Boxes for each Mentioned samples. Please mention it clearly as you have asked for 4 different types of Sample Holders.	
2. Linseis Thermal Analysis India	Point No. 6- Infrared detector head, with InSb/any compatible sensor, Liquid Nitrogen (LN2) cooled along with Liquid Nitrogen (LN2) 'DEWAR' having capacity for 24 hours operating time. **Changes Required:** Infrared detector head, with InSb/any compatible sensor, Liquid Nitrogen	

	(LN2) cooled along with Liquid Nitrogen (LN2) thermo-flask for refilling. Preferably liquid nitrogen should last 18 hours or more inside the detector. Suitable separate cryocan or dewar could be given.	
Waters (India) Private Limited TA Instruments Division	**Point No. 3.** Heating rate in the range of 0.1K to 50K/minute (or higher) **Changes Required:** A heating rate in the range of up to 10 °C/min **Point No. 6.** Infrared detector head, with InSb/any compatible sensor, Liquid Nitrogen (LN2) cooled along with Liquid Nitrogen (LN2) 'DEWAR' having capacity for 24 hours operating time. **Changes Required:** Liquid Nitrogen (LN2) 'DEWAR' having capacity of 25 L or more **Point No 13.** Pulse energy: up to 10 J/pulse or higher. (Software controlled) **Changes Required:** Pulse energy: up to 15 J/pulse or higher. (Software controlled) **Point No. 28** - User list & After sales service: A comprehensive list of users of the Instrument must be supplied. In India and abroad over the last five years. **Changes Required:** We request the committee to accept user lists and after-sales service testimonials for different Light/Laser Flash Analyzers from the same manufacturer, rather than limiting the evaluation solely to the quoted model.	

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
Point No. 3. Heating rate in the range of 0.1K to 50K/minute (or higher)	**As per Waters (India) Private Limited TA Instruments Division** **Point No. 3.** Heating rate in the range of 0.1K to 50K/minute (or higher) **Changes Required:** A heating rate in the range of up to 10 °C/min	Technically Accepted but No modification required in tendered specifications	**Point No. 3.** Heating rate in the range of 0.1K to 50K/minute (or higher)	
Point No. 6. Infrared detector head, with InSb/any compatible sensor, Liquid Nitrogen (LN2) cooled along with Liquid Nitrogen (LN2) 'DEWAR' having capacity for 24 hours operating time.	**Point No. 6.** Infrared detector head, with InSb/any compatible sensor, Liquid Nitrogen (LN2) cooled along with Liquid Nitrogen (LN2) 'DEWAR' having capacity for 24 hours operating time. **Changes Required:** Liquid Nitrogen (LN2) 'DEWAR' having capacity of 25 L or more	Modified	**Point No. 6.** Infrared detector head, with InSb/any compatible sensor, Liquid Nitrogen (LN2) cooled along with Liquid Nitrogen (LN2) Dewar having capacity of 20L or higher	
Point No 13. Pulse energy: up to 10 J/pulse or higher. (Software controlled)	**Point No 13.** Pulse energy: up to 10 J/pulse or higher. (Software controlled) **Changes Required:** Pulse energy: up to 15 J/pulse or higher. (Software controlled)	Technically Accepted but No modification required in tendered specifications Technically	**Point No 13.** Pulse energy: up to 10 J/pulse or higher. (Software controlled)	

Point No. 28 - User list & After sales service: A comprehensive list of users of the Instrument must be supplied. In India and abroad over the last five years.	**Point No. 28** - User list & After sales service: A comprehensive list of users of the Instrument must be supplied. In India and abroad over the last five years. **Changes Required:** We request the committee to accept user lists and after-sales service testimonials for different Light/Laser Flash Analyzers from the same manufacturer, rather than limiting the evaluation solely to the quoted model.	Accepted but No modification required in tendered specifications		
Point No. 6 - Infrared detector head, with InSb/any compatible sensor, Liquid Nitrogen (LN2) cooled along with Liquid Nitrogen (LN2) 'DEWAR' having capacity for 24 hours operating time.	**<u>As Per Point NETZSCH Technologies India Pvt. Ltd.</u>** Point No. 6 - Infrared detector head, with InSb/any compatible sensor, Liquid Nitrogen (LN2) cooled along with Liquid Nitrogen (LN2) 'DEWAR' having capacity for 24 hours operating time. **Changes Required:** A Dewar of capacity 20 Ltr or better for keeping LN2 should be included in the Offer to cool the Detector	Accepted	**Point No. 6.** Infrared detector head, with InSb/any compatible sensor, Liquid Nitrogen (LN2) cooled along with Liquid Nitrogen (LN2) Dewar having capacity of 20L or higher	
Point No. 14 - The required sample carrier/sample support with cap/cover should be made up of high temperature stable materials (Greater than operating temperature) Ø 12.7 mm round samples: 4 Nos,,10 mm x 10 mm square samples: 4 Nos, ·Ø 8mm round samples 04 Nos, Ø 6mm round samples 04 Nos,	**Point No. 14** - The required sample carrier/sample support with cap/cover should be made up of high temperature stable materials (Greater than operating temperature) Ø 12.7 mm round samples: 4 Nos,,10 mm x 10 mm square samples: 4 Nos, ·Ø 8mm round samples 04 Nos, Ø 6mm round samples 04 Nos, Should also supply the blind cover/blank caps: 4 Nos for each geometrical shape and size for closing the openings in the sample tray if there is no sample in that designated position. One set additional sample holders	Accepted	**Point No. 14** - The required sample carrier/sample support with cap/cover should be made up of high temperature stable materials (Greater than operating temperature) Ø 12.7 mm round samples: 4 Nos,,10 mm x 10 mm square samples: 4 Nos, ·Ø 8mm round samples 04 Nos, Ø 6mm round samples 04 Nos, Should also supply the blind cover/blank caps: 4 Nos for each geometrical shape	

Should also supply the blind cover/blank caps: 4 Nos for each geometrical shape and size for closing the openings in the sample tray if there is no sample in that designated position. One set additional sample holders compatible/fit with the supplied instrument sample chamber and detector should be provided for each Powders, Paste, Resins, Lamellar, and Liquid samples.	compatible/fit with the supplied instrument sample chamber and detector should be provided for each Powders, Paste, Resins, Lamellar, and Liquid samples. **Changes Required:** we request to please mention it clearly are you asking for a compartment or a Box to keep the sample holders and detector or Boxes for each Mentioned samples. Please mention it clearly as you have asked for 4 different types of Sample Holders.		and size for closing the openings in the sample tray if there is no sample in that designated position. One set sample holder should be provided for each Powder, Paste, Resins, Lamellar, and Liquid samples.	
Point No. 6- Infrared detector head, with InSb/any compatible sensor, Liquid Nitrogen (LN2) cooled along with	**<u>As per Linseis Thermal Analysis India</u>** Point No. 6- Infrared detector head, with InSb/any compatible sensor, Liquid Nitrogen (LN2) cooled along with Liquid Nitrogen (LN2) 'DEWAR' having capacity for 24 hours operating time. **Changes Required:** Infrared detector head, with InSb/any compatible sensor, Liquid Nitrogen (LN2) cooled along with Liquid Nitrogen (LN2) thermo-flask for refilling. Preferably liquid nitrogen should last 18 hours or more inside the detector. Suitable separate cryocan or dewar could be given.	Modified	**Point No. 6.** Infrared detector head, with InSb/any compatible sensor, Liquid Nitrogen (LN2) cooled along with Liquid Nitrogen (LN2) Dewar having capacity of 20L or higher	

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/BG(3059-GTE/25 PB **Date: 27-01-2026**

TSC Minutes

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. 6. Infrared detector head, with InSb/any compatible sensor, Liquid Nitrogen (LN2) cooled along with Liquid Nitrogen (LN2) 'DEWAR' having capacity for 24 hours operating time.	**Point No. 6.** Infrared detector head, with InSb/any compatible sensor, Liquid Nitrogen (LN2) cooled along with Liquid Nitrogen (LN2) Dewar having capacity of 20L or higher
Point No. 14 - The required sample carrier/sample support with cap/cover should be made up of high temperature stable materials (Greater than operating temperature) Ø 12.7 mm round samples: 4 Nos,,10 mm x 10 mm square samples: 4 Nos, ·Ø 8mm round samples 04 Nos, Ø 6mm round samples 04 Nos, Should also supply the blind cover/blank caps: 4 Nos for each geometrical shape and size for closing the openings in the sample tray if there is no sample in that designated position. One set additional sample holders compatible/fit with the supplied instrument sample chamber and detector should be provided for each Powders, Paste, Resins, Lamellar, and Liquid samples.	**Point No. 14** - The required sample carrier/sample support with cap/cover should be made up of high temperature stable materials (Greater than operating temperature) Ø 12.7 mm round samples: 4 Nos,,10 mm x 10 mm square samples: 4 Nos, ·Ø 8mm round samples 04 Nos, Ø 6mm round samples 04 Nos, Should also supply the blind cover/blank caps: 4 Nos for each geometrical shape and size for closing the openings in the sample tray if there is no sample in that designated position. One set sample holder should be provided for each Powder, Paste, Resins, Lamellar, and Liquid samples.

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.

Annexure 1
Specifications of "THERMAL CONDUCTIVITY INSTRUMENT"

1. Operating principle: Xenon pulse light flash or Laser
2. Measurement Temperature range: RT (Room Temperature) to 900 C (or higher) in a single run
3. heating rate in the range of 0.1K to 50K/minute (or higher)
4. The temperature accuracy of the furnace should be ± 1K(or better) at a given preset temperature (with compatible thermocouples)
5. The furnace should be capable of running samples under oxidizing, reducing and inert atmospheres (Vacuum order: 10^{-2} mbar or better with suitable vacuum pump)
6. Infrared detector head, with InSb/any compatible sensor, Liquid Nitrogen (LN2) cooled along with Liquid Nitrogen (LN2) Dewar having capacity of 20L or higher.
7. The instrument should have the capability to measure thermal diffusivities over the range of 0.01 mm^2 /s to 1000 mm^2 /s and Thermal Conductivity Calculation range: 0.1 W/(m.K) to 2000 W/(m·K).
8. Accuracy of thermal diffusivity ± 3 % or better
9. Repeatability of Thermal diffusivity: ± 2 % or better
10. Accuracy of Specific Heat ± 5% or better
11. Repeatability of Specific heat: ± 3 % or better
12. The instrument should have the capability to measure specific heat of samples with an accuracy of better than 5% (for standard materials)
13. Pulse energy: up to 10 J/pulse or higher. (Software controlled)
14. The required sample carrier/sample support with cap/cover should be made up of high temperature stable materials (Greater than operating temperature) Ø 12.7 mm round samples: 4 Nos,,10 mm x 10 mm square samples: 4 Nos, ·Ø 8mm round samples 04 Nos, Ø 6mm round samples 04 Nos, Should also supply the blind cover/blank caps: 4 Nos for each geometrical shape and size for closing the openings in the sample tray if there is no sample in that designated position. One set sample holder should be provided for each Powder, Paste, Resins, Lamellar, and Liquid samples.
15. The instrument should allow measurements on samples with thickness ranging from 0.5mm (or lower) to 5 mm (or Higher).
16. Certified reference materials with calibration data for measurement of thermal diffusivity and specific heat should be provided (With Calibration Certificate validity: minimum two years)
17. The vendor should supply a refrigerated bath/chiller circulator with a suitable cooling capacity along with all necessary connection parts.
18. The supplied system should meet the following compliance ASTM E-1461 or related equivalent Standards
19. The software should operate the instrument in the automatic mode with automatic data acquisition system
20. Data acquisition and analysis system for operating the thermal conductivity instrument: Latest Windows Professional, core i7 processor 1TB HDD SATA & 8 GB RAM DDR4: Optical Drive, USB Key board Mouse Bundle, 25-inch monitor (or better with camera. All necessary software should be latest operating system.

21. The software must have the capability of operation, data acquisition and analysis for thermal conductivity, specific heat and related measurements. The software should contain mathematical models for analysis in plate-direction (in-plane). The software should have the capability of calculating the thermal conductivity using measured thermal diffusivity data along with data of the specific heat and bulk density
22. The software should allow specific heat determination on the basis of a comparative method
23. The software should have capability to export data in different formats; such as, pdf, emf, tiff, jpg or bmp, etc.
24. Installation & Commissioning of the instrument and Training (for 5 working days) at CSIR-NPL, New Delhi to be taken care by the supplier
25. Warranty for complete instrument for a period of 12 months from the date of installation & commissioning.
26. Supplier should ensure the availability of hardware and software components/spares up-to a minimum of 8 years after expiry of the standard warranty.
27. Compliance Statement: The supplier must submit technical brochures and proper application notes adequately explaining and confirming the availability of the features in the model of the equipment being quoted. The supplier must submit a table indicating the compliance and non-compliance of the features of the model of the equipment being quoted with those given in the indent.
28. User list & After sales service: A comprehensive list of users of the Instrument must be supplied. In India and abroad over the last five years.