

## Minutes of the Meeting (MOM) of the Pre-Bid Conference

Date: 13/09/2023

With reference to the File No. 14-VI/HM (1120)23/PB dated 15.04.2023, regarding Pre-Bid conference for procurement of "Resistance Thermometry Bridge and Accessories", a Pre-Bid Conference was held on 12/09/2023 (Tuesday) at 11.00 AM in the Second Floor Conference Room, Main Building CSIR-NPL, New Delhi under Chairmanship of Dr. H. K. Singh.

Following vendors & their representatives participated in Pre-Bid Conference.

1. Mr. Ritesh Tiwari from M/s Wika Instruments India Pvt. Ltd. , Plot No. 40 & 54, Gat No. 94+100, Hi-Cliff Industrial Estate, Village Kesnand, Wagholi, Pune - 412 207. Maharashtra, India,
2. Mr. Vinay Kumar Vijay, M/s Measurements International LLP, 410, 4<sup>th</sup> Floor, K M Trade Tower, Radisson Holtel Building, Sector-14, Kaushambi, Ghaziabad, Uttar Pradesh – 201010

The following members attended the meeting:

1.	Dr. H. K. Singh, Chief Scientist	Chairman
2.	Dr. Sachchidanand Singh, Chief Scientist	Member
3.	Dr. P. K. Siwach, Principal Scientist	Expert
4.	Dr. Priyanka Jain, Senior Principal Scientist	Expert
5.	Dr. Hansraj Meena, STO-1	Indenter
6.	Dr. D. D. Shivagan, Senior Principal Scientist	Member

Dr. D.D. Shivagan, presented the tendered specifications to the pre-bid participants. Each and every point was discussed in details by the committee members. The queries received from vendor during the pre-bid meeting were discussed and clarified. The details specification and responses from vendors are given below:-

### Specifications for Resistance Thermometry Bridge and Accessories

Specification	M/s Wika Instruments India Pvt. Ltd, Pune - 412 207 MH	M/s Measurements International LLP, Ghaziabad- 201010 UP
Ratio Range: 0 to 1.299999999 or Higher	Agreed	Agreed
Ratio Accuracy: $\leq \pm 20$ ppb ( $\pm 5 \mu$ K) over full range	Agreed	Agreed
Resolution: 1 ppb (0.25 $\mu$ K)	Agreed	Agreed
Sensing Current: (1mA, 2mA, 5mA) X 0.1, 10 and $\sqrt{2}$	Agreed	Agreed
Sensing Current Accuracy: $\pm 0.1\%$	Agreed	Agreed
Band width: (0.5, 0.2, 0.1) Hz X 0.1 and 0.001	Agreed	Agreed
Measuring Range: 0 to 260 $\Omega$ or Higher	Agreed	Agreed
Rated Accuracy Range: 0 to 130 $\Omega$	Agreed	Agreed
R <sub>s</sub> Range: 1 to 200 $\Omega$	Agreed	Agreed
Communication: IEEE-488.2/RS-232 along with Data Acquisition System and Software	Agreed	Agreed

Power: 240 V/ 50Hz/60Hz	Agreed	Agreed
Multi Channel Scanner with Pre -Heat (10 Channel or More)	Agreed	Agreed
Resistance value: 1 $\Omega$ Tolerance: $\pm 10$ ppm Long-term stability: 0.5 ppm per year Temperature Coefficient: 0.5 ppm per $^{\circ}\text{C}$	Agreed	Agreed
Resistance value: 10 $\Omega$ Tolerance: $\pm 10$ ppm Long-term stability: 0.5 ppm per year Temperature Coefficient: 0.5 ppm per $^{\circ}\text{C}$	Agreed	Agreed
Resistance value: 25 $\Omega$ Tolerance: $\pm 10$ ppm Long-term stability: 0.5 ppm per year Temperature Coefficient: 0.5 ppm per $^{\circ}\text{C}$	Agreed	Agreed
Resistance value: 100 $\Omega$ Tolerance: $\pm 10$ ppm Long-term stability: 0.5 ppm per year Temperature Coefficient: 0.5 ppm per $^{\circ}\text{C}$	Agreed	Agreed
Maintenance Bath for Standard Resistance : Temperature Range: 5 $^{\circ}\text{C}$ to 50 $^{\circ}\text{C}$ Stability: $\pm 0.010^{\circ}\text{C}$ Immersion Depth: 200mm or Higher Opening: 150mm X 150mm or Higher Silicon Oil: Will be supplied with bath	Agreed	Agreed
Connecting Cable and adaptor box for SPRT connection (2 Nos )	Agreed	Agreed
Connecting Cable for Reference Resistors (4 Nos )	Agreed	Agreed
Calibration Certificate of the Bridge and Standard Resistances as per ISO IEC 17025:2017	Agreed Bridge and Standard Resistances as per ISO IEC 17025:2017 will be Provided	Agreed UKAS calibration Certificate ISO IEC 17025:2017 will be Provided

The meeting ended with thanks to Chair.