



भारतीय ताराभौतिकी संस्थान INDIAN INSTITUTE OF ASTROPHYSICS

(विज्ञान व प्रौद्योगिकी विभाग, भारत सरकार के अधीन स्वायत्त निकाय)

(An Autonomous Body under Department of Science and Technology, Government of India)

॥ ब्लॉक Block, कोरमंगला Koramangala, बेंगलूरु Bengaluru - 560 034

No. RFT/IND/283/23-24/

Dated: 05.01.2024

Minutes of Pre-Bid Meeting

Sub: SITC of 3D Coordinate Measuring Machine at IIA reg.

Ref: 1) GeM Bid No. GEM/2023/B/4330899 dt 13.12.2023

2) IIA Tender Enquiry No. RFT/IND/283/23-24

3) Pre-Bid meeting dated 22.12.2023.


The following bidders representatives attended for pre-bid meeting.

Sl. No.	Name of Participants	Name of the Firm
1	Shri Krishna Murari	M/s Accurate Gauging & Instruments Pvt., Ltd.,
2	Shri Kishan S	M/s Mitutoyo South Asia Pvt., Ltd.,

IIA Officials were present in the meeting to provide clarification to the queries raised by the prospective bidders.

The queries raised by the prospective bidders were discussed and clarified during the meeting. The clarifications arrived thereof are indicated as enclosed / attached.

Apart from the above queries/request made by M/s Carl Zeiss India (Bangalore) Pvt., Ltd., and M/s Hexagon Metrology (India) Pvt., Ltd., are also considered for issuing Corrigendum.


K.P. Vishnu Vardhan
Sr. Stores and Purchase Officer

Pre-Bid Meeting Clarifications

Sub: SITC of 3D Coordinate Measuring Machine at IIA reg.

Sl. No.	Clause No.	As per RFP	Queries / Deviation Request received from	Vendors Query and Deviation Request	IIA's Response
1	3.1	Measuring Range ✓ X-axis : 700 mm Y-axis : 700 mm Z-axis : 600 mm	M/s Accurate Gauging & Instruments Pvt., Ltd.,	The mentioned machine size is nonstandard model offered by only M/s Carl Zeiss, Germany (details attached). Worldwide CMM manufacturer offer cuboidal shape machines for high accessibility and better ergonomics. Neutral Specification: ✓ X – Axis: 800 mm or more, Y – Axis: 1000 mm or more, Z – Axis: 600 mm or more. Resolution : 0.1 micron or better	The specifications are based on IIA's functional requirement and not to match any model of any Manufacturer. However, Possible variation has been accorded in the Corrigendum issued as below. "Measuring Range X-axis : 700 mm +/-100mm Y-axis : 700 mm +/-100mm Z-axis : 600 mm +/-100mm" ✓
2	4.4 ✓	Measuring System: ✓ High Precision glass ceramic scales of reflected light system . The scales should not be rigidly fixed or glued to the guide to avoid distortion due to temperature gradient.	M/s Accurate Gauging & Instruments Pvt., Ltd.,	Each manufacturer chooses its own design and technology to achieve desired Accuracy and repeatability. IIA should refrain from defining material and construction and should mention the functional requirements. Neutral Specification: High Precision Metallic/glass ceramic scales of reflected light system to achieve the desired accuracy and repeatability.	The specifications are based on IIA's functional requirement. However, Possible variation has been accorded in the Corrigendum issued as below. "High precision Glass ceramic or any other suitable material scales having minimum thermal expansion coefficient. Preferably, scales should not be rigidly fixed or glued to the guideways to avoid distortion due to temperature gradient" ✓
3	5.1.1	Indexing Mechanism : ✓ The machine should also have facility to use INDEXING mechanism with a step of 2.5° and should able to rotate +/- 180 degrees in A & B axes. Suitable catalogue should be attached for the same.	M/s Accurate Gauging & Instruments Pvt., Ltd.,	We wish to inform you that 2.5° indexing is a proprietary feature of particular imported make and no other CMM manufacturer can offer this probing system. Please note that traditional 3 axis 3D CMMs consist of 7.5°, 5° & 2.5° indexing probe heads. All of these 3 probe heads belong to same probe family and capable to perform same function. The purpose of 2.5° indexing can also be met by 7.5° indexing probe heads offered by CMM manufacturers worldwide Moreover 7.5° probe has high accuracy and large stylus extensions carrying capacity. Neutral Specification: The machine should also have facility to use INDEXING mechanism with a step of 7.5° and should able to rotate in 0-105 degrees A & +/- 180 degrees B axes. Suitable catalogue should be attached for the same.	The specifications are based on IIA's functional requirement and not to match any model of any Manufacturer. However, Possible variation has been accorded in the Corrigendum issued as below. "The machine should have an indexing mechanism / probe head with a step of 2.5° or Less and should be able to rotate at +/- 180° in one axis & +/- 105° minimum in another axis."
			M/s Mitutoyo South Asia Pvt., Ltd.	Generic indexing angle (Infinite Degree) to be mentioned	

Handwritten signature and date: 5/1/24

4	7.3	<p>Software for measuring Known / Unknown 2D / 3D curves .</p> <p>f. Import of Curve data from CAD systems in various formats: VDA, ASCII,& DXF formats. ✓</p> <p>g. Export of Curve data in VDA and ASCII format. ✓</p>	M/s Accurate Gauging & Instruments Pvt., Ltd., ✓	<p>We request to clarify the IIA requirement of German Automotive manufacturers association ("Verband der Automobilindustrie") format VDA.</p> <p>Neutral Specification: f. Import of Curve data from CAD systems in various formats: ASCII,& DXF formats.</p> <p>g. Neutral Specification: Export of Curve data in ASCII format.</p>	<p>Corrigendum issued mentions as below.</p> <p>f. "Import of Curve data from CAD systems in various formats: ASCII,& DXF formats"</p> <p>g. "Export of Curve data in ASCII format or any graphical format" ✓</p>
5	10	<p>Bidding Requirements</p> <p>e. All important items such as probe head / controller / software etc., should be supplied from the same manufacturer. ✓</p>	<p>M/s Accurate Gauging & Instruments Pvt., Ltd., ✓</p>	<p>Please note that Probe head, CNC Controller & software are some of the accessories used in 3D CMM & require different expertise.</p> <p>1. It is global practice of all CNC machine tool or CMM manufacturers worldwide to outsource accessories/ subassemblies like probing's, controller, software etc. made by reputed suppliers such as Siemens, Fanuc, Renishaw, Heidenhain etc. CMM produced globally use Renishaw probing system.</p> <p>2. CMMs OEMs offer DMIS based application software's based on users specific requirement with different modules, with DMIS platform same CMM programs can run on different makes machines.</p> <p>3. No Machine tool/CMM OEM have expertise of Manufacturing 100% parts inhouse and they offer several accessories from reputed makes. This gives users the freedom to purchase from the marketplace the optimum technical and commercial solutions for adding CMM capacity rather than requiring users to buy only particular imported make CMMs at high cost.</p> <p>Neutral Specification: All important items such as probe head / controller / software etc., should be supplied from the reputed manufacturer. ✓</p>	<p>Corrigendum issued mentions as below.</p> <p>"All-important parts such as probe head / controller / software etc., should be of a reputed manufacturer" ✓</p>
6	4.2 ✓	<p>Main Features: f. It should be possible to vary the speed of movement of the axes from 0 to 70 mm per second. CNC speed upto 250 mm/sec ✓</p>	M/s Mitutoyo South Asia Pvt., Ltd., ✓	<p>Generic speed range to be mentioned. ✓</p>	<p>Corrigendum issued mentions as below.</p> <p>"It should be possible to vary the speed of movement of the axes from 0 to 70 mm per second. CNC speed of 250 mm/sec or faster" ✓</p>

Handwritten signature and date:
W.D.L.M.
5/1/24

The bidders are requested to sign and stamp this pre bid minutes and attach with the technical bid as a token of acceptance.

K.P.V
5/1/24

K.P. Vishnu Vardhan
Sr. Stores and Purchase Officer