



NATIONAL CENTRE FOR EARTH SCIENCE STUDIES

(An Institution under the Ministry of Earth Sciences, Govt. of India)

P.B. No. 7250, Akkulam, Thiruvananthapuram-695 011, Kerala.

PURCHASE DIVISION

Our Ref : PUR-PROC/18b/2022-PUR-NCESS

(To be quoted in all correspondence)

Dt. 09/07/2024

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CORRIGENDUM No.1

Tender No. PUR-PROC/18b/2022-PUR-NCESS

For X-Ray Diffractometer (XRD) with ancillary units with 5 Year Warranty

Modification to the Specification as decided in the prebid by the Committee. All the other terms and conditions remain unchanged :-

Sl	Existing tender specification	Modified specification/Clarifications
1	Page no. 6 of tender document, Point No. 6	Goniometer - “Angular range (Without accessories) – 360 ⁰ ” Useable angular range limit in reflection mode should be -10 to 160 ⁰ or better.
2	Page no. 6 of tender document, Point No. 6	Goniometer - “Minimum usable angular range limits (with accessories) - $-100^{\circ} < 2\theta \leq 165^{\circ}$ or better. Useable angular range limit in reflection mode should be -10 to 160 ⁰ or better.
3	Page no. 8 of tender document, Point No. 8	Optics for 1. General BB Geometry. 2. Parabolic multilayer mirror based parallel beam for Thin Film Analysis. - Low angle X-ray Diffraction - Beam knife for low angle measurement should be provided. Beam knife range of adjustment: 0.5 mm - 5 mm above sample surface. If the instrument of the company can provide the purpose of beam knife in the given range of height from sample surface (adjustment is not necessary) it is acceptable.
4	Page no. 9 of tender document, Point No. 8	Optics - Micro Diffraction Optics - Suitable optics for Micro diffraction analysis with a spot size of 50,100,300, 500 micron should be offered. For spotting the location of microdiffraction analysis and for beam attenuating alignment, dual laser alignment tool with camera and alignment module to be quoted under option. Microscope is also acceptable, given that the analysis of micro diffraction can be performed at par with the quality offered by laser method.
5	Page no. 7 of tender document, Point No. 7	X-Ray tube: X-ray tube Power: Maximum operating power of 2 kW or more with rating of 50 kV and 60 mA. High resolution of output data is always preferred. Considering the fact that power of 1.8 kW is enough for performing normal measurement company can quote x-ray tube with

			operating power of 1.8 kW or more provided it has higher resolution than the tube with power of 2kw or more.
6	Page no. 8 of tender document, Point No. 8	Optics – “Parabolic Multi-Layer Mirror based parallel beam for Thin Film Analysis. High Intensity monochromatic beam optics using parabolic graded curved multilayer mirror parallel beam optics must be provided.”	If a company has advanced technology (better than or equivalent to the corresponding specification given in the tender), without compromising on the output result and quality of the instrument, they can quote it. Any such claim must be elaborated and supported by proof if required by the technical evaluation committee while examining the technical bid.
7	Page no. 9 of tender document, Point No. 8	Optics - For spotting the location of microdiffraction analysis and for beam attenuating alignment, dual laser alignment tool with camera and alignment module to be quoted under option.	The given specification is general. It does not matter whether the alignment is achieved using single or dual laser. We require the alignment to be done through any method.
8	Page no. 13 of tender document, Point No. 12	Software – Database “Minimum 2 license should be provided”.	One license is enough, but it would be good if this single license is enough to operate the database in two different computers (Two users allowed with single license). As mentioned in the specification, these licenses must be issued with the rate concession provided by ICDD for academic institutions. Also, the database must be compatible with the data analysing software for all types of analysis specified in tender including the reitveld analysis and quantitative phase analysis. The data analysis software must be capable of Unit cell indexing, Unit cell refinement, Space group testing, unit cell transformation etc. ICDD PDF-4+/5+ must be quoted as directed in specification.

Yours Faithfully,

Sd/-
Deputy Manager (Purchase)