PROCUREMENT OF EQUIPMENT FOR BIOSENSE INSTITUTE IN NOVI SAD, SERBIA
(PROCUREMENT NO. IOP/58-2021/RD)

Clarification no. 2

Issued on May 12, 2022

Regarding the list of questions that the Purchaser, Public Investment Management Office Belgrade, No. 11 Nemanjina street, has received from the potential bidders, concerning the procurement procedure: Equipment for Biosense Institute in Novi Sad, Serbia no. IOP/58-2021/RD, we give you the following answers:

Question 1:

Lot 10 - X-Ray Diffraction

"1) Subject of the Lot 10 - XRD Diffraction is ""A device for recording and analysis of x-ray diffraction patterns of powder and thin film solid samples"". Do you mean measurements on thin film samples, like preferred orientation, crystallinity, stress, in-plane structure factors from epitaxial films, in-plane reciprocal space maps from ultra thin (a few nm) films, and full pole figures (without diffraction/scattering intensity from the film base, without the need for sample re-mounting and transmission measurements and with sample in horizontal position)?

For such functionality, additional degree of freedom of the goniometer is needed: scanning in the plane which is orthogonal to $\theta/2\theta$ diffraction plane - i.e. in-plane axis of the goniometer is needed.

Question 1: Is it necessary to offer the goniometer with the additional axis for measurements in the orthogonal plane to the $\theta/2\theta$ diffraction plane?

Answer 1:

Yes. It is necessary to offer the goniometer with the in-plane arm, together with the software functions supporting such measurements.

Question 2:

Lot 10 - X-Ray Diffraction

2)Since the equipment is intended to be used as high-resolution XRD system measuring of the poly-phase structures with many elements/oxides, etc, in very small amounts, monochromation

of the incident and diffracted signals for elimination of K□1/K□2 lines are advisable, or even - the must.

In the technical specifications, there are no explicit requests for such monochromator(s), so our question is:

Question 2: Is it necessary to offer the incident and/or receiving monochromator(s)?

Answer 2:

Yes. For high-resolution measurements, it is necessary to offer both, incident and receiving monochromators, Ge(220), two-bounce type.

Question 3:

Lot 10 - X-Ray Diffraction

3) In the technical specifications, concerning applicative software characteristics, there is a request ""Software support for accessories included in system setup."".

Question 3: Since the requested equipment is intended to be used for broad spectrum of applications, and, in the same time, software functions have to be optimally chosen for the needed applications, please, specify major applications which are to be supported by the applicative software.

Answer 3:

Besides the instrument control and alignment, data manipulation, report generation, and similar basic functionality, the applicative software has to support all the requested hardware modules, including HR powder XRD functions, thin film HR XRD functions; crystallite size and lattice strain, lattice parameters refinement, ratio of crystalline and amorphous phase; Rietveld method for quantitative analysis, lattice constant determination, and structure refinement using the whole XRD pattern; ab initio crystal structure analysis based on powder diffraction data, suitable for organic as well as inorganic compounds; XRR parameters of thin film structures such as thickness, (electron) density, and interface roughness etc; HRXRD evaluation of the crystallinity, strain, composition, and thickness of single crystalline substrates or epitaxial layers deposited on the substrates based on thin film rocking curves and reciprocal space maps; pole figure measurements and analysis; size distribution functions of nano-scale pore/particles and correlation length functions for materials with density fluctuation (SAXS, MRSAXS).

Question 4:

Lot 16 - Data Center

Regarding Lot 16 - Data Center, we ask that due to the Covid-19 pandemic around the world and the impact on the transport disruption caused by the Russia-Ukraine crisis, which caused shortages of parts and delayed production at all levels, while economic experts predict that the shortage of components will continue and the increased demand has affected the duration of the period from order to delivery due to lack of equipment and manpower, extend the required

delivery time to a realistic up to 300 days. It is also predicted that the increase in demand will affect the problems of logistics for a good part of 2022.

According to all the above, we also ask you to answer us whether you stay strictly with the technical specification or allow mild deviations so that we can make the delivery and fulfill your request as soon as possible?

Answer 4:

For understandable reasons delivery time can be extended to 10 months in Lot 16. Please find the updated Excel file and the Amendment No. 2 to Bidding Documents reflecting this attached.

Regarding deviations, please refer to definitions stipulated in the Bidding Documents (Page 25) Section I. Instructions to Bidders, Article 30. Responsiveness of Bids for clarification of what will be considered a substantially responsive bid and what will be considered material deviations.

According to Bidding Documents, Clause 30.2. (a) Part 1. Bidding Procedures, Section I. Instructions to Bidders, Evaluation and Comparison of the bid, a material deviation, reservation, or omission is the one that affects in any substantial way the scope, quality, or performance of the Goods and Related Services specified in the Contract. However, interested persons are invited to submit a request for clarification regarding each specific deviation for the device they intend to offer in this bidding procedure, which will be considered and answered by the Purchaser.

Public Procurement Committee

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