



Mark: EZP.270.77.2023

Otwock, November 14, 2023

The Ordering Party
National Center for Nuclear Research
05-400 Otwock-Świerk
Andrzeja Sołtana 7

Clarifications to the content of the Terms of Order Specification

Concerning the public procurement procedure entitled: "**The Design, Manufacture and Delivery including installation of a helium cooling system for the Polish Free Electron Laser - PoIFEL at the premises of the National Centre for Nuclear Research in Otwock**"

- I. Pursuant to Article 135(2) and on the basis of Article 135(6) of the Act of 11 September 2019 Public Procurement Law (Journal of Laws of 2023, item 1605), the Ordering Party cites the content of the questions and provides explanations to the questions submitted:

Question 1: VOLUME III - 6.6.: LIQUEFIED NITROGEN CONSUMPTION A mass flow of no less than 115 kg/h is required to operate the HCS. A reduction in this consumption leads to higher investment costs and a higher demand for electrical energy.

Answer: The Ordering party allows a system with a total liquid nitrogen consumption of up to 120 kg/h.

Question 2: VOLUME III - 14.1.: GENERAL INFORMATION Pressure tests carried out with water should be approved by the Awarding Entity if adequate drying is ensured. For example, drying the plate fin heat exchanger with nitrogen to an appropriate dew point.

Answer: Due to the risk of leaving water residues in the system, resulting from the inability to completely remove it, there is a risk of improper operation or even damage to system components. Therefore, the ordering party requires that tests be conducted in a manner that prevents water from entering the helium cooling system.

Question 3: VOLUME III - 14.2.2.3.: PRESSURE TEST According to PED and EN 13480-5, a pneumatic pressure test must be carried out up to 1.1 times the maximum permissible pressure. According to health and safety regulations we should carry out the pressure tests in accordance PED and EN 13480 5.

Answer: The Ordering party allows pressure tests to be conducted in accordance with the requirements of EN 13480-5, i.e., with a required test pressure of 1.1 times higher than the operating pressure. However, the ordering party recommends conducting tests with a pressure 1.5 times higher than the operating point if safety considerations permit.





Question 4: VOLUME III - 6.7.2.: HELIUM PURIFICATION AND OIL SEPARATION SYSTEM The following is specified: “The helium purification and oil separation system shall also allow measurements of the wear degree of consumable materials such as filters or sorbents.” Can you please specify which measurements are necessary or whether only the connections should be provided? Oil measurements are complex, maintenance-intensive and must be calibrated regularly.

Answer: The Ordering party allows for any technical solution that enables the determination of the level of consumption of purification system components and signals the need for their replacement. This includes solutions based on operating time as well as the volume of filtered gas.

Question 5: VOLUME III - 14.4.4.: MEASUREMENTS OF THERMODYNAMIC AND HYDRAULIC PARAMETERS Is it allowed to measure the mass flow rate in the 2K return line? This simplifies the measurement and deliver more accurate results.

Answer: The Ordering party may allow the use of helium flow measurement provided that the contractor guarantees that the measurement method and the placement of flow sensors ensure the correct operation of the entire system in all operating modes, i.e., cooling, normal operation, and heating.

I. The Ordering Party pursuant to Article 137(1) of the Act of 11 September 2019. - Public Procurement Law (Journal of Laws of 2023, item 1605) modifies by amending individual provisions:

1) VOLUME III Description of the Subject of the Order – 6.6 Liquefied nitrogen consumption changes to: “The maximum consumption of liquefied nitrogen by the Helium Cooling System in order to improve efficiency shall not exceed 120 kg/h. The Contractor shall take the necessary measures to minimize the consumption of liquefied nitrogen.

After estimating the necessary quantity of liquefied nitrogen, the Contractor shall estimate the size and type of the storage tank, assuming that the tank will be filled once a week”

The above changes do not change the contract notice and constitute an integral part of the procedure documentation (SWZ) and should be taken into account when preparing offers.

The above explanations and modifications constitute an integral part of the SWZ.

.....
(signature of the Ordering Party's Manager
or a person authorized by him)

