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Instytut
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Gliwice, dn. 23.01.2025

Case no: DZ/0270/ZP-25/2024

CLARIFICATION OF CONTENT
CONTRACT DOCUMENTS
(EXPLANATION OF THE CONTENT OF THE SPECIFICATION OF ORDER TERMS)

Subject of the procedure for: **supply of an electric vacuum induction furnace with a melting weight of 250 kg**

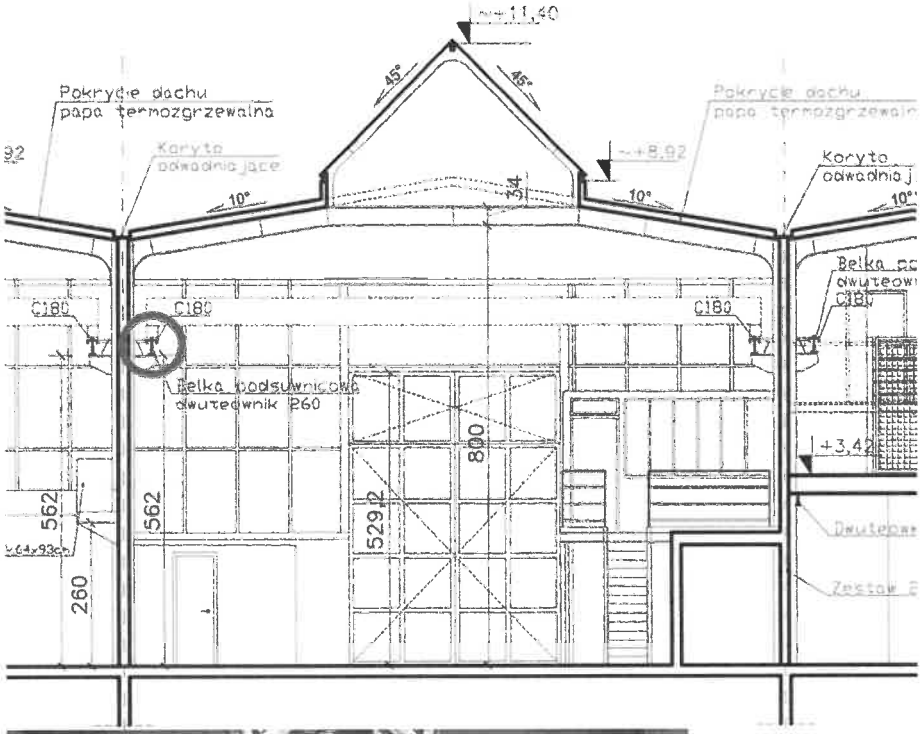
1. Paragraph 9b,d of the Technical Specification:
   9. control and observation of the metallurgical process
   b)camera in the furnace chamber to observe the melting process and the state of the metal bath,
   d)camera in the casting chamber to record the pouring process of the ingot.
   Do you accept the installation of cameras outside the chamber with dedicated sight glasses for process observation?

- **Answer:Yes, the client accepts the installation of cameras outside the chamber.**

2. Paragraph 10 of the Technical Specification:
   Size of the hall on which the VIM250 vacuum furnace will be located:
   length: 37 m, width: 11 m, height to crane runway 5.5 m
   Possibility to descend below level 0 between support columns located every 4 m along the length of the hall

   Will the dimensions of the building allow for the installation of a furnace with a height from floor level at the highest point of 8300 mm?

- **A: Please find attached drawings and photos of the hall in which the furnace is planned to be installed, and the Ordering Party reminds of the possibility to carry out an on-site inspection of the hall (currently being renovated) - in accordance with point. 5.11 SWZ.**

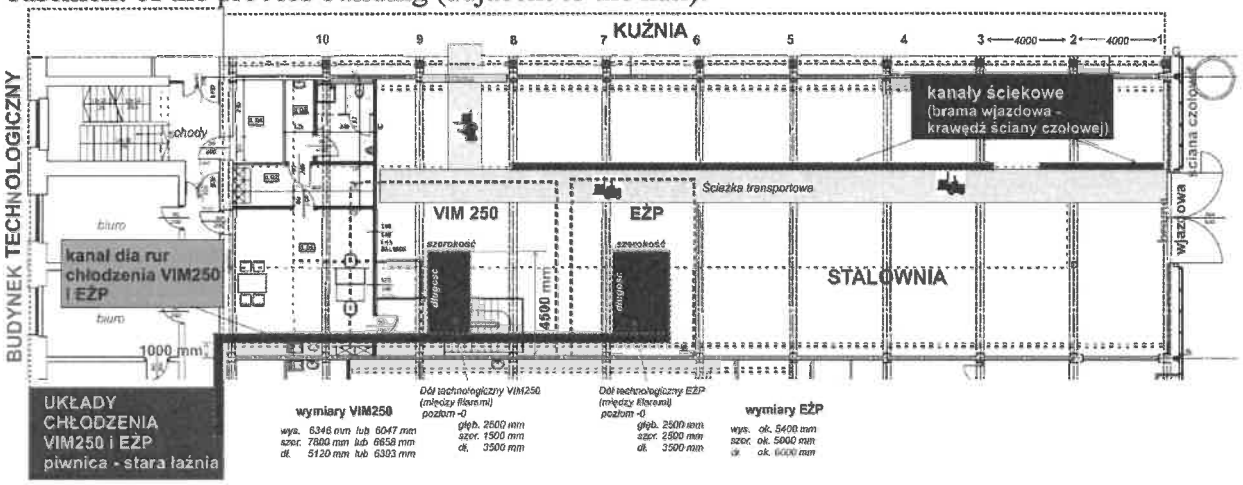


The furnace will be located where the scissor lift stands (on the left side of the hall)

Overhead crane - as of today, overhead crane access is planned from the entrance gate to the middle of the hall.

In addition, the Contracting Authority draws attention to the following aspects:

- the height of the crane runway is approx. 5.5 m, the access of the crane will not be to the furnace itself, it will be limited by bumpers installed on the crane runway,
- There will be 2 process pits in the hall: one for the 2.5 m deep furnace and one for the EŻP unit,
- the closed cooling system for the furnace and the EŻP unit will be located outside the hall - in the basement of the process building (adjacent to the hall).



3. Paragraph 20 of the Technical Specification:
   Casting ladle with a capacity of approx. 350 kg suitable for easy insertion and withdrawal from the casting chamber (mould).

   Please explain why the requirement is for a capacity of 350 kg when the required furnace capacity is 250-270 kg?

- **A: A "freeboard" (space between the mirror of the metal and the warming backfill and the top edge of the ladle) is necessary so that no spillage of liquid metal occurs during transport. The volume must guarantee safe transport of the liquid metal with slag layer over the casting moulds or non-standard cast iron ingot moulds (e.g. EZP electrode ingot moulds).**

4. Paragraph 17 c) of the Technical Specification:
   Possibility of installing ceramic filters in the intermediate ladle

   Please indicate the exact type and dimensions of the ceramic filters indicated

A: The contractor will equip the furnace at the furnace stage with dedicated ceramic filters.

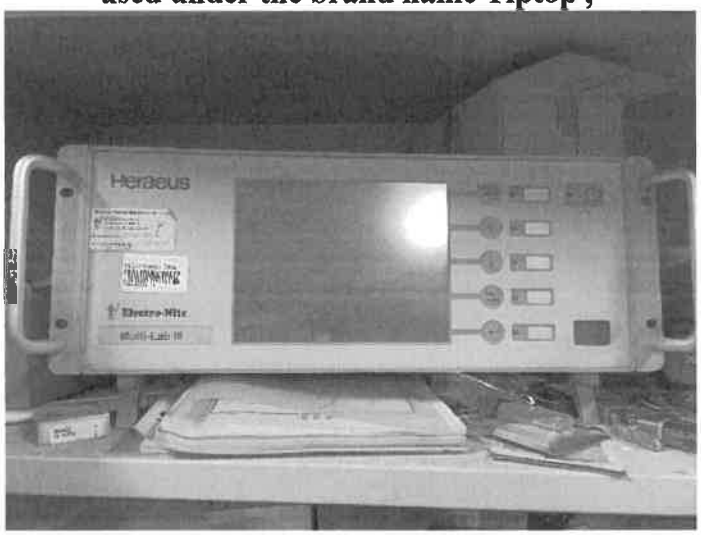
The detailed selection of filters or the development of new filters dedicated to the intermediate ladle will be possible after hot testing and verification of its functionality and will be the subject of a separate order.

5. Paragraph 8e of the Technical Specification:
   Implementation of a TOS oxygen activity meter from Heraeus Electro-nite
   Please indicate the exact type and parameters of the oxygen activity meter indicated in the specification

- **Answer:**

1) **Below and in an appendix to these explanations, the Ordering Party has included photos and drawings of the oxygen activity and liquidus temperature measurement instrument, which the Ordering Party owns and which is to be implemented in the operation of the furnace. With this instrument, the following quantities can be measured and calculated:**

- **temperature and oxygen activity in liquid steel; for this measurement a sensor is used under the brand name Celox ,®**
- **carbon content of steel,**
- **aluminium content of steel for low oxygen activity levels (below 3.0 ppm active oxygen),**
- **temperature of liquid steel and its liquidus temperature; for this measurement sensors are used under the brand name Tiptop ,®**



To the best of his knowledge, the Purchaser informs that the dimensions of the disposable (exchangeable) sensor for measuring with the lance of the Multi-Lab III instrument can be adapted (shortened to a certain extent) to the customer's needs. The sensors can be coated to prevent splashing of liquid steel during measurement.

2) **T.O.S. samplers are used to take samples for the determination of total oxygen and nitrogen, and the resulting samples (rod) can also be used to determine hydrogen in steel if they are frozen in dry ice and sent to the laboratory immediately after collection.**

In the VIM250 furnace under investigation, the ArMOR system from Heraeus or equivalent will be used to determine hydrogen in the steel. The sample handling is analogous, a sample is taken, in this case a lollipop-disk sample (not a rod sample as in T.O.S.), which is frozen and transferred to the laboratory.

6. Paragraph 21 of the Technical Specification:
   Metallurgical process control, support applications and visualisation in accordance with the Purchaser's requirements:

a) Continuous recording of process parameters (vacuum value, Ar flow, flow and temperature of cooling water for the coil and crystalliser, inverter operating parameters, etc.), possibility of viewing the process on selected computers in the GIT network.

Continuous recording is the task of the SCADA system and will be implemented. The question is what is implied by the phrase "possibility to view on GIT computers"? Access to the SCADA system preview or the possibility of access by other means?

- **A: The Purchaser requires an application to be implemented on min. 3 computers running Windows 11 Pro, providing the ability to monitor the metallurgical process. These computers will be designated by the contracting authority and will operate in the**

domain environment of the existing computer network at the contracting authority's premises. Contact with the SCADA system network should be made in consultation with the contracting authority's IT cell. Process viewing should not interfere with the process control operator's computer at the furnace.

b) creation of databases of technological parameters for steel/alloy grades, on selected computers of the Ordering Party networked with the furnace computer system. Please provide more details. What are these databases? Are they the recipes according to which the process takes place and the possibility to create them outside the computer which is located at the furnace?

- **Answer: The Orderer has in mind any database system connected with a set of applications supporting metallurgical process. We confirm that it means recipes (the software must contain at least: technological chart, batch materials, consumables, casting equipment, obtaining of alloying elements) with the possibility of their creation and modification on the computer at the furnace and min. 3 indicated computers working in a network in the Ordering Party's seat.**
  Detailed technological solutions are provided by the Contractor.

(c) creation of a database of input and auxiliary materials (warehouse), on selected computers connected via a network to the furnace computer system.

How would the entry of such items into the "warehouse" take place? A solution is to use a shared database, but it should be specified through which interface entries will be made into this database.

- **A: Through a dedicated application that is part of the above mentioned metallurgical process support system. This system should also provide a graphical interface for modifying the base.**

e) applications supporting the metallurgical process for the calculation of alloying elements, deoxidisers and modifiers, with the possibility of making adjustments to calculation parameters (elemental yields) on selected computers in the GIT network.

What would be the nature of these applications? Is this to be separate software or could it be included in the SCADA system? Will guidelines be developed for the creation of such "calculators"? Will a sample GUI for such an application be developed?

- **A: It can be included in the SCADA system. The Purchaser expects an off-the-shelf solution from the Contractor that allows parameterisation and has a GUI.**
  The calculator should support the metallurgical process in the following ranges:
  .....
  The Ordering Party expects a ready-made solution to be delivered, therefore no sample GUI is expected to be developed.
  The Purchaser expects the application to be parameterised both in terms of functionality and GUI.

Questions to the proposed Contract annexed to the tender:

7. Conditions of delivery and acceptance, § 3, item 8. The condition for the final acceptance of the Equipment referred to in paragraph 4 c. is the positive performance of acceptance tests: "hot", which is to be understood as: trouble-free performance of min. 7 melts for 4 grades of steel (Maraging steel MS300, bearing steel 100Cr6, high-alloy steel 316L, structural steel C40 or other as agreed with the Contractor) on the Device and casting of ingots without internal and

external defects, in which the area of occurrence of equiaxial crystals will be for carbon steel (e.g. C40) min. 25% of the ingot volume. The financing of the input materials, the smelting and the quality testing of the ingots are the responsibility of the Purchaser.

The provision is unclear. Please clarify the exact number of melts for each steel grade, e.g. Maraging steel MS300 - 1 melting, etc.

- **Answer:**
  Test smelts:
  - 3 smelts from the current order book -MS 300 or other steel grade - failure-free smelts without ingot quality control; we consider these as training smelts for the furnace operator.
  During these tests we also want to check the correct operation of the equipment implemented in the furnace from other suppliers, i.e. mechanisms introducing sensors for measuring: temperature of liquid steel, active oxygen, temperature of liquidus, sampling for determination of chemical composition and hydrogen, and recording of results in the furnace computer system (database of measurement data with diagrams, Smelting Chart),

- 1 Maraging MS 300 steel melt - with ingot quality tests; acceptance melt,
- 1 100Cr6-bearing steel melt with ingot quality tests; acceptance melt,
- 1 melt of 316L high-alloy steel - with ingot quality tests; acceptance melt,
- 1 C40 structural steel melt - with ingot quality tests; acceptance melt.

In addition, we request the following amendments to the contract annexed to the of this tender:

8. Amendment of para. 1 para. 3 lit. e. of the Contract to the following new wording:
   "e. Installation and commissioning of the Equipment to the extent precisely indicated in the Contractor's Technical Specification; execution of installation work, necessary electrical connections, etc., preparation of the hall in which the equipment will be sited and basic construction work are the responsibility of the Purchaser,".

- **Answer: The Ordering Party does not agree to the above. At the same time, the Purchaser informs that the above provision of Par. 1 para. 3 lit. e refers only to work related to the installation of the cooker at the Purchaser's premises (connections, seating of the cooker). All adaptation and construction work remains the responsibility of the Purchaser.**

9. Amendment of para. 1 para. 3 lit. g. of the contract to the following new wording:
   "g. to carry out acceptance tests confirming the compliance of the Equipment with the requirements of the Contractor's Technical Specification,".

- **A: The purchaser does not agree to the above.**

10. Amend Par. 2 of the contract to the following new wording:
    "The Contractor undertakes to perform the Subject of the Contract, within a period of up to fifteen months from the date of signing of the contract, the contract being deemed signed on the date of the last signature of the person signing the contract (qualified signature). In the case

of a handwritten signature, the date of signing of the contract shall be deemed to be the date of conclusion of the contract as indicated in the contract's company.".

- **Answer: The relevant answer will be published after the content of the contract notice has been amended (pursuant to Article 137(5) of the PPL Act).**

11. Amend Par. 3 paragraphs 8 and 9 of the contract to the following new wording:
"8. The condition for the final acceptance of the Equipment referred to in paragraph 4 c. is the successful completion of acceptance tests: 'hot', which is to be understood as: failure-free performance of min. 7 melts for 4 grades of steel (Maraging steel MS300, bearing steel 100Cr6, high-alloy steel 316L, structural steel C40 or other after agreement with the Contractor) on the Device and casting of ingots. Financing of the feedstock materials, smelting and quality testing of the ingots are the responsibility of the Contractor.
9 (deleted).".

- **A: The purchaser does not agree to the above changes.**

12. Amend Par. 4 para. 1 letter m. of the contract to the following new wording:
"m. to perform other activities not specified above, related to the functions of the Contractor for the proper execution of the subject matter of the contract and not exceeding the scope specified in the Seller's technical specifications.".
Answer:

- **A: The purchaser agrees to the above.**

13. Amendment of Par. 4 para. 3 lit. e. of the Agreement to the following new wording:
"The completion of the entire Subject of the Agreement shall be documented by a final acceptance protocol signed by both Parties to the Agreement; the acceptance protocol shall be drawn up, inter alia, after the tests referred to in Par. 3(8) of the Agreement, the sole purpose of which is to confirm that the Equipment conforms to the Contractor's Technical Specification.".

- **A: The purchaser does not agree to the above.**

14. Amend Par. 5(1) second sentence of the contract to the following new wording:
"Settlement for the performance of the subject of the contract will be made on the basis of partial VAT invoices and a final VAT invoice.
Stage I - issued upon completion of the design phase - 40% of the contract value,
Stage II - issued after testing the Equipment at the Contractor's premises - 50 % of the contract value,
Stage III - final invoice - issued after final acceptance of the subject of the contract.".
Answer:

The Ordering Party decides to change the wording of §5 item 1 to the following: For the performance of the Subject of the Agreement specified in § 1 of the Agreement, the Parties agree on a total lump sum remuneration equal to the Contractor's bid price in the amount of:

- net price ..... /word...../,
- VAT ..... %,
- gross price ..... PLN /word...../. *(to be entered after selection of the most advantageous offer),*

Settlement for the performance of the subject of the contract will be made on the basis of partial VAT invoices and a final VAT invoice.

Phase I - issued upon completion of the design phase - 30% of the contract value,
Stage II - issued after testing the Equipment at the Contractor's premises - 50% of the contract value,
Stage III - final invoice - issued after final acceptance of the subject of the contract.

15. Amend Par. 6(1) of the Contract to read as follows:
"The Contractor shall grant to the Ordering Party and its successors in title a warranty, for the complete Equipment for a period of 24 months, counting from the date of the protocol acceptance without reservation of the entire Subject of the Agreement, but no longer than 30 months, counting from the date of delivery of the Equipment to the Ordering Party's plant, and undertakes, during this period, to remove at its own cost and risk all defects and restore the functional and technical efficiency of the Equipment. The Parties exclude the warranty for defects in the Subject of the Contract.".

- **Answer:**
The purchaser does not agree to the above.

16. Amend Par. 8(1), (3) to (5) of the contract to read as follows:
"1. The Contractor shall be obliged to pay contractual penalties:
a. for a delay in performing the subject of the agreement in the amount of 0.1% of the net remuneration specified in § 5 para. 1, for each day of delay, calculated from the day set for the completion of the subject of the Agreement in accordance with § 2, but not more than 5% of the net remuneration specified in § 5 para. 1;

- **Answer.**
The Awarding Authority decides to change the wording of the above provision to the following:
"a. for a delay in the performance of the subject matter of the contract in the amount of 0.1 % of the net remuneration specified in § 5(1), for each day of delay, calculated from the day set for the completion of the Subject Matter of the Contract in accordance with § 2."

b. in the event of withdrawal from the Agreement or termination of the Agreement by the Principal or the Contractor for reasons attributable to the Contractor - in the amount of 10% of the net remuneration specified in §5 item 1;

- **Answer.**
The client agrees to the above.

c. for delay in removal of faults/defects or failures ascertained during the warranty period - in the amount of 0.03% of the net remuneration specified in § 5 subsection 1, for each day of delay beyond the deadlines specified in § 6 subsections 4 and 5, but not more than 5% of the net remuneration specified in § 5 subsection 1;

- **Answer.**
The Ordering Party stipulates the following
"for delay in removal of faults/defects or failures ascertained during the warranty period - in the amount of 0.03% of the net remuneration specified in § 5(1), for each day of delay beyond the deadlines specified in §6(4) and (5)".

d. (deleted);

- **Answer**
  The purchaser does not agree to the above.

e. if the works covered by the Agreement are performed by an entity other than the Contractor or other than the Subcontractor directed to perform the works in accordance with the procedure specified in § 9 - a contractual penalty of PLN 5,000.00 for each such identified case;

f. for failure to submit within the deadline a copy of the concluded Subcontracting Agreement or any amendment thereto, certified to be a true copy of the original, pursuant to § 9 subsection 4, in the amount of PLN 2 000.00 for each day of delay; ;.
g. for untimely payment of remuneration due to subcontractors or further subcontractors - in the amount of 0.2% of the gross contractual remuneration resulting from the subcontractor agreement to which the payment relates - for each day of delay in payment.

- **Answer:**
  Points e-g The contractual provisions remain unchanged.

(3) Undisputed monetary penalties, i.e. previously accepted by the Contractor in writing, may be deducted from the Contractor's remuneration.

- **Answer:**
  The purchaser does not agree to the above.

(4) The total amount of liquidated damages charged to the Contractor shall not exceed 10% of the net remuneration specified in § 5(1).

- **Answer:**
  The purchaser agrees to the above.

(5) The Contractor's liability under this Agreement shall not include lost profits and indirect damage of any kind. The Contractor's total liability in connection with the performance of the Agreement shall be limited in amount to 50% of the net remuneration specified in § 5.1. The above exclusion of liability shall not apply to cases of damage caused intentionally by the Contractor.".

- **Answer:**
  The purchaser does not agree to the above.

17. Amend Par. 10 of the contract to the following new wording:
"1. The Contractor shall provide a performance bond in the amount of 5% of the total price quoted in the tender, i.e. ..... PLN (in words: ..... PLN) in the form of ..... .
(it shall be entered after the selection of the most favourable offer).
(shall be entered after the selection of the most advantageous bid). 2. 70% of the lodged performance bond shall be returned within 30 days from the day of completion of the subject of the agreement and recognition by the Purchaser as duly completed.
(3) The remaining part of the performance bond, i.e. 30%, shall constitute security for claims under the guarantee and shall be returned to the Contractor no later than on the 15th day following the expiry of the guarantee period.".

- Answer: The client does not agree.

18. Amend Par. 12(3)(c) of the Contract to the following new wording:
"3. In addition, the Purchaser shall have the right to withdraw from this Contract or any part thereof in the following cases:
a. The Contractor fails to perform the Subject of the Contract in accordance with the Contract or the written objections of the Ordering Party, or neglects or interrupts the works through his fault for a period longer than 14 days, or remains in delay with the performance of the Subject of the Contract,
b. gross violation of the quality of the delivery, significant differences between the parameters achieved by the Equipment and those resulting from the contents of the offer,
c. (removed),
d. The Contractor remains in delay with the commencement of the performance of the Subject of the Contract, despite receiving an additional written request from the Ordering Party,
e. commencement of liquidation of the Contractor."

- **Answer: The client does not agree.**

The above explanations are an integral part of the SWZ.
The remaining provisions of the TS remain unchanged.
NOTE: The content and spelling of requests for clarification are original, copied from correspondence sent by Contractors. The Contracting Authority is not responsible for errors in the content of requests for clarification.

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