

APPENDIX NO. 1b TO THE REQUEST FOR QUOTATION no. 1/0099\_18/2020 of 17.11.2020

TECHNICAL BID FORM

The bid constitutes a reply to the request for quotation no. 1/0099\_18/2020 of 17.11.2020 concerning **purchase, deliveries (in accordance with DDP INCOTERMS 2010), installation and start-up of the pilot installation of the gas cleaning plant for Blast Furnace No. 2 in Dąbrowa Górnicza.**

**1. Data of the bidder:**

- a. Name: .....
- b. Address of the registered office: .....
- c. Taxpayer ID No. (NIP): .....
- d. Business Entity ID No. (REGON): .....
- e. Person authorized to contact the Buyer:  
 name and surname: .....  
 Phone: .....  
 e-mail address: .....

**2. Reference to the entry criteria. The Ordering Party will verify the compliance of the submitted matter of the offer with the description of the subject matter of the contract by examining its completeness. Failure to meet one of the following requirements by the Bidder (being the entry criteria) will mean that the offer will be rejected and will not be subject to further evaluation. The table must be compulsorily completed. The columns "Confirmation (YES / NO) and "Reference to the offer: Page No. Point No." must be completed. If the cells in the columns "Description of task feasibility" and "Remarks of the bidder" are to be left blank, please put the "-" sign in the appropriate cells.**

Item	List of criteria admitting to the next stage of bids evaluation	Confirmation (YES/NO)	Description of task feasibility	Remarks of the bidder	Reference to the bid: Page no. Point no.
<b>1</b>	Declaration of the Bidder on the acceptance of Health & Safety Agreement applicable in AMP				
<b>2</b>	Submission of at least 1 credential issued by for whom a system of Gas Cleaning Plant for blast furnace was manufactured as a General Bidder from the last 10 years (name of the purchaser, location, value, year, description of process, system parameters, performance time)				
<b>3</b>	The Bidder shall submit a declaration that it is not in arrears with the payment of public & legal receivables (taxes, social insurance premiums)				
<b>4</b>	The Bidder shall submit a declaration that within <b>60 days</b> form the contract signing date, it shall hold a relevant third-party liability insurance policy for the value of min. <b>5 mln EUR</b> for one event with the annual accumulation <b>15 mln Euro</b> . The policy shall be valid/extended for the entire contract term for the value indicated above				

<b>5</b>	Design and manufacturing, supply, erection and commissioning of GCP comprising of: uptakes, downcomer, raw gas isolation valve, scrubber, demister, connection to existing clean gas pipe equipped with goggle valve.				
<b>6</b>	Confirmation of acceptance of main gas parameters as stipulated by Customer in technical specification				
<b>7</b>	Confirmation of battery limits as stipulated by Customer in attachment no. 10				
<b>8</b>	Confirmation of acceptance of utilities parameters as stipulated by Customer in attachment no. 12				
<b>9</b>	Wear protection - internal elements: uptakes & downcomer: 100mm thick Al <sub>2</sub> O <sub>3</sub> based material (Caldegun C 28HR or equivalent) anchored with at least 49 pcs / m <sup>2</sup> of stainless steel anchors or hex metal anchors				
<b>10</b>	Wear protection - internal elements: cyclone: at least 40mm thick protection layer between gas zone and steel shell for areas with impact of gas stream with solid particles, at least 30mm thick corundum zirconium tiles on lower intermediate cone				
<b>11</b>	Wear protection - internal elements: connection pipe from cyclone to scrubber: 50mm thick Al <sub>2</sub> O <sub>3</sub> based material (Caldegun C 28 or equivalent) anchored with at least 49 pcs / m <sup>2</sup> of stainless steel anchors or hex metal anchors				
<b>12</b>	Wear protection - internal elements: scrubber and demister: for all surfaces with direct contact with gas min. 1,5mm thick vinyl-ester coating with glass flakes applied with primer and minimum 2 layers				
<b>13</b>	Time needed from furnace blow down till readiness for industrial operation ≤ 100 days				
<b>14</b>	Steel quality for gas vessels and ducts: min. P265GH or equivalent compliant with DIN EN 10028				
<b>15</b>	Protection of steel structures and platforms: corrosion protection compliant with C5-I according to ISO 12944 or hot dip galvanized (min. 85 um) with bolted connections				
<b>16</b>	Protection of external surfaces of ducts and vessels - painting system compliant with C5-I according to ISO 12944				
<b>17</b>	Amount of weeks from the date of contract's signature until the contractor readiness to blow down ≤ 75 weeks				
<b>18</b>	Downcomer inclination angle should be at least 40 degrees				
<b>19</b>	Efficiency of dry dust separation in the cyclone min. 85%. Points for measurement to be designed and executed by the supplier. Measurements taken according to VDEh 579				
<b>20</b>	Clarified water consumption ≤ 1200 m <sup>3</sup> /h				
<b>21</b>	Confirmation of clean gas dust content ≤ 10 mg/Nm <sup>3</sup> , measured after demister				

<b>22</b>	Confirmation of clean gas mist content $\leq 10 \text{ g/Nm}^3$ , measured after demister				
<b>23</b>	Allowable pressure drop across gas cleaning plant measured from cyclone inlet pressure transmitters to pressure measured after demister below 400 mbar				
<b>24</b>	Ability to modify cyclone efficiency during planned shutdowns of blast furnace - at least 3 working points				
<b>25</b>	Dust storage capacity for nominal parameters min. 12 hours				
<b>26</b>	Cyclone installation must be equipped with intermediate vessel of dust evacuation. Equipped with weighting system				
<b>27</b>	Design, delivery and installation of equipment to moisturize dust and transport into wagons				
<b>28</b>	Design, delivery and installation of anti-implosion valve on gas route				
<b>29</b>	Design, delivery and installation of goggle valve - gas tight isolation between downcomer and cyclone				
<b>30</b>	Design, delivery and installation of steam injection line equipped with isolation valves, flowmeter, non return valves, regulation valve as per good engineering practice with maximum injection rate 20 t/h. Installation to be actuated from blast furnace control room				
<b>31</b>	Wet gas cleaning installation must be equipped with at least 2 hydraulically actuated annular gap elements. In case of one's failure another one needs to be able to control the pressure in range specified in main gas data appendix				
<b>32</b>	Top gas pressure needs to be regulated with max. 2 % of deviation comparing to set point considering blast furnace stable operation				
<b>33</b>	Safety measures for preventing uncontrolled gas emission to the atmosphere in case of equipment failure i.e. water seal pipe or fail-safe solution based on valves positions and alarms. Must include SIL-rated loops to address functional safety in accordance with European Directives and IEC 61508				
<b>34</b>	Design and erection of new connection to low pressure gas network equipped with gas tight goggle valve				
<b>35</b>	Design and erection of equalizing line, bleeders lines as per battery limits appendix				
<b>36</b>	Venting valves used for purging of gas duct for stoppage purposes need to be actuated from operators room				
<b>37</b>	All piping, hydraulic, electrical, automation, instrumentation, refractory, erection works as defined in Basic Engineering and Detail Engineering stages.				
<b>38</b>	Implementation of dedicated stand-alone workstation connected with controller directly over ethernet to provide full controllability of the process including online trending, process alarm, events.				



<b>39</b>	Design and preparation of electrical systems as per battery limits				
<b>40</b>	Preparation of complete designs: - technical, - construction, - detailed (working), - as-built in full scope and for all disciplines in accordance with national and EU requirements and standards				
<b>41</b>	All necessary demolition works needed to execute installation as per design. Including uptakes, downcomer, supporting truss under downcomer, dustcatcher.				
<b>42</b>	BE input for obtaining Building Permit (in accordance with attachment no. 8) must be delivered within 8 weeks from contract placement.				
<b>43</b>	Preparation and submission - along with the bid - of a detailed schedule broken down by weeks, from the contract signing date until the blow-in of the blast furnace and PAC signment date				
<b>44</b>	All assembly-installation works resulting from design documentation developed by the Contractor and from possible conflicts with existing systems, structures, working platforms				
<b>45</b>	Performance of start-ups of the system (cold and hot), trainings, bringing the system to full production capabilities.				
<b>46</b>	Warranty minimum 18 months from signature of acceptance protocol				

....., (date) .....  
City, on  
representative

.....  
Company stamp, stamp and signature of a



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