APPENDIX NO 1 TO THE CONTRACT AWARDING REGULATIONS

Dabrowa Gornicza, 17.10.2018

REQUEST FOR ASSESSMENT
FOR THE ESTIMATED VALUE OF THE ORDER

In relation to the implementation of the Project “Application of electromagnetic stirrers on the strands of a continuous billet casting machine in order to produce a new grade of steel designated for steel cord production” (Application No.: POIR.01.02.00-00-0210/17), co-funded by European Regional Development Fund and under Operational Program Smart Growth 2014-2020, Measure 1.2 “Sectoral programs R&D” (a competition organized by the National R&D Center no 7/1.2/2017), and in relation to the obligation to make purchases based on the most competitive offer, observing the principles of fair competition, efficiency, openness and transparency, ArcelorMittal POLAND S.A. submits a Request for assessment regarding the initial estimation of the value related to the design, manufacture, delivery, erection and commissioning of devices for 8-strand billet continuous casting machine. A detailed description of the project of the object of estimation can be found in point II of this inquiry:

THE RFQ WILL BE USED BY THE BUYER TO ESTIMATE THE VALUE OF THE ORDER DESCRIBED IN POINT II.

FOR THIS ORDER THE BUYER ACCEPTS PARTIAL PRICING INFORMATION.

THE SUBMITTED PRICE OFFER WILL BE OF AN INFORMATIVE CHARACTER ONLY. IT WILL NOT CONSTITUTE A COMMERCIAL PRICE OFFER AS DEFINED IN ART.66 PAR.1¹ OF THE CIVIL CODE.

I. BUYER:

ArcelorMittal Poland S.A.
Al. J. Piłsudskiego 92
41-308 Dąbrowa Górnicza, Polska
Agnieszka.Chudek1@arcelormittal.com; Robert.Sidlo@arcelormittal.com
M: +48 668 395 180; +48 668 021 584
Adres strony www: http://poland.arcelormittal.com/

hereinafter referred to as the Company, the Buyer

¹ Art. 66. § 1 of the Civil Code: Declaration of the will to conclude the contract made to the other party constitutes an offer if it specifies the important provisions of this contract.
II. DETAILS OF THE SUBJECT OF THE ORDER SUBJECT TO ESTIMATION:

Code/ codes CPV:

43720000-6 CASTING MACHINES

43700000-0 PARTS OF METALLURGICAL MACHINES AND SIMILAR PARTS

43721000-3 PARTS OF CASTING MACHINES

The subject of the valuation is design, manufacturing, delivery in accordance with DDP INCONTERMS 2010, erection and commissioning of devices for B-strand billet continuous casting machine (CCM2) including in particular: oscillators, electromagnetic strand stirrers, cooling rings in zone 1. The scope of supply consist also modification of existing secondary cooling zone and dismounting of equipment which will be not used after the installation of the new equipment described in the scope of supply list.

II.1. DESCRIPTION OF THE SUBJECT OF THE ORDER SUBJECT TO ESTIMATION:

The description of the order can be find in Attachment 2.

II.2. PLACE OF DELIVERY OF THE SUBJECT OF THE ORDER: ArcelorMittal Poland, Dabrowa Gornicza, Al. J. Piłsudskiego 92, 41-308 Dabrowa Gornicza, Poland

II.3. ESTIMATED LEAD TIME OF THE ORDER SUBJECT TO ESTIMATION: 44 weeks after contact assigning.

III. DEADLINE AND MANNER OF SUBMITTING PRICE INFORMATION FOR THE PURPOSE OF ORDER VALUE ESTIMATION:

III.1. Price information should be submitted till 30.10.2018. The price information has to be submit per e-mail to: Robert.Sidlo@arcelormittal.com, copy of the e-mail to: Agnieszka.Chudek1@arcelormittal.com

III.2.

III.3. Price information should be prepared according to the form which constitutes Enclosure no 1 to this RFQ.

With regards,
The Buyer’s Team

DTV: ArcelorMittal Poland S.A. 
Al. J. Piłsudskiego 92, 41-308 Dąbrowa Górnicza
NIP 634-24-63-083 Regon 277899853
- 20 -

(Company’s stamp, stamp and signature of the authorized person)

ENCLOSURES TO THE REQUEST FOR ASSESSMENT FOR THE ESTIMATED VALUE OF THE ORDER:

---

ENCLOSURE NO 1: PRICE QUOTATION FORM FOR ORDER VALUE ESTIMATION.
ENCLOSURE NO 2: TECHNICAL SPECIFICATION

ENCLOSURE NO 1 TO THE REQUEST FOR ASSESSMENT FOR THE ESTIMATED VALUE OF THE ORDER:

PRICE QUOTATION FORM FOR ORDER VALUE ESTIMATION

The price information constitutes the answer to the Request for assessment from 17.10.2018, concerning the estimation of the value of the order of the value related to the design, manufacture, delivery, erection and commissioning of devices for 8-strand billet continuous casting machine included in the Project: "Application of electromagnetic stirrers on the strands of a continuous billet casting machine in order to produce a new grade of steel designated for steel cord production" (Project No. POIR.01.02.00-00-0210/17), co-funded by European Regional Development Fund and under Operational Program Smart Growth 2014-2020, Measure 1.2 "Sectoral programs R&D" (a competition organized by the National R&D Center no 7/1.2/2017).

The price information presented below will be of an informative character only, it will not constitute a commercial offer as defined in Art.66 par.1 of the Civil Code.

1. Details of the Bidder:

   a. Name: ......................................................
   b. Seat address: ...............................................
   c. NIP (TAX ID number): ..............................................................
   d. REGON (Business ID Number): ..............................................
   e. Person authorized to contact the Buyer:
      First name and last name: .............................................
      phone: .................................................................
      e-mail: ...............................................................

2. The following price is offered for the subject of the order:

<table>
<thead>
<tr>
<th></th>
<th>PRICE</th>
<th>CURRENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>NET VALUE</td>
<td></td>
<td>EURO</td>
</tr>
<tr>
<td>VAT VALUE (...)</td>
<td></td>
<td>EURO</td>
</tr>
<tr>
<td>GROSS VALUE</td>
<td></td>
<td>EURO</td>
</tr>
</tbody>
</table>

3. We declare that I have become familiar with the description of the subject of the order and we have no remarks.

4. We recognize the fact that the Price information constitutes the answer to the Request for assessment which will be used by the Buyer for the estimation of the value of the order described in Point II of the RFQ.

Place, date ..................................................

Bidder's stamp, stamp and signature of the authorized person

---

3 Art. 66. § 1 of the Civil Code; Declaration of the will to conclude the contract made to the other party constitutes an offer if it specifies the important provisions of this contract.
ENCLOSURE NO 2 TO THE REQUEST FOR ASSESSMENT FOR THE ESTIMATED VALUE OF THE ORDER:

TECHNICAL SPECIFICATION

I. Due to the obligation of the Company to apply the competition principle, this technical specification is the subject of the order allowing for determination of the value of the order by potential Bidders.

The following specification is prepared with the highest accuracy to determine full, unambiguous and comprehensive description of the subject of the order so as to enable Bidders to specify all their obligations and risks and to account for the price and other components of the offer in a responsible manner.

All purchases, services and delivery which are the subject to this inquiry for determining the value of the contract, must be included and cooperate with the existing infrastructure and equipment in the Company and must meet the same technological standards. Therefore, the need to maintain the same technological conditions and the need to preserve the unification of equipment resulting from the expansion of existing infrastructure determined the provisions in this specification. The applied records are justified in the need to ensure smooth implementation of the project. Indications regarding expected technical parameters and indications regarding specific types and producer names are of a general nature, referring only to exemplary indications of equivalent products and are not the only accepted solution. On this basis, the purchaser allows equivalent solutions.

The Bidder is obliged to familiarize himself with this specification and make sure that the devices are technically feasible and take full responsibility for the guaranteed operation of the delivered equipment in terms of performance, parameters and efficient and reliable operation.

The detailed scope of works that are the subject of the RFQ is presented in the further part of this study.

Technical parameters of the existing billet continuous casting machine at ArcelorMittal Poland, Unit in Dąbrowa Górnicza:

<table>
<thead>
<tr>
<th>Typ of caster:</th>
<th>Concast 22/19 – CCS with Convex technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caster design:</td>
<td>curved</td>
</tr>
<tr>
<td>Caster radius</td>
<td>9/16 m</td>
</tr>
<tr>
<td>Amount of strands</td>
<td>6 [-] + 2 (commissioning of 2 strands planned in Q3/2020)</td>
</tr>
<tr>
<td>Formats:</td>
<td>140x140 mm, 160x160 mm, 190x220 mm</td>
</tr>
<tr>
<td>Casting module:</td>
<td>Open casting; SEN</td>
</tr>
<tr>
<td>Distance between strands</td>
<td>1200 mm</td>
</tr>
<tr>
<td>Mould electromagnetic stirrer</td>
<td>yes</td>
</tr>
<tr>
<td>Mould level regulation</td>
<td>Stopper rod mechanism and emergency slide gate</td>
</tr>
<tr>
<td>Oscillation (existing):</td>
<td>Short lever oscillators with eccentric drive</td>
</tr>
</tbody>
</table>
II. The subject of the order will be design (so-called basic data, basic and detail engineering), manufacturing, delivery of DDP in accordance with INCOTERMS 2010, installation and commissioning of the following devices listed in the table below for billet continuous casting machine. The subject of the order will also be the dismantling of unnecessary devices, those that must be dismantled in order to install new devices.

The scope of supply can be found in next pages. The scope of supply includes the preferred location for the installation of electromagnetic stirrers, that mean in the upper part of the secondary cooling zone 2A. If the Bidder has an additional idea to place new electromagnetic stirrers in a different place, please propose the place for the installation in the technical offer.

Place, date

Bidder’s stamp, stamp and signature of the authorized person
<table>
<thead>
<tr>
<th>No</th>
<th>Device / Service</th>
<th>B-strand</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DISMOUNTING OF EQUIPMENT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>Dismounting of existing equipment which will not be used anymore in the future after installation of the new equipment in the frame of this project</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>STEEL STRUCTURE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td>Modification for new equipment</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>Mechanical erection material</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2.3</td>
<td>Documentation: basic data, basic engineering, detail engineering, circuit diagram (if required), operation and maintenance manuals, as-built documentation, other documentation; each documentation: 3 hardcopies as well PDF/DWG files. Documentation in PL and EN version.</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2.4</td>
<td>Delivery of equipment from point 2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2.5</td>
<td>Erection of equipment from point 2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2.6</td>
<td>Commissioning of equipment from point 2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>OSCILLATOR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1</td>
<td>Oscillator: hydraulic or electric remotely adjustable stroke and frequency from 0-300 strokes/min and stroke length of total amplitude: 4+15mm (+/- 2 x 7,5mm)</td>
<td>8</td>
<td>In case you offer electric adjustable drive: please state reference plants in use and on order.</td>
</tr>
<tr>
<td>3.2</td>
<td>Oscillator frame</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3.3</td>
<td>Hydraulic (if necessary) and electric devices necessary to work of new oscillators</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3.4</td>
<td>Adjustment of the oscillators to the exiting automation system</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3.5</td>
<td>Documentation: basic data, basic engineering, detail engineering, circuit diagram (if required), operation and maintenance manuals, as-built documentation, other documentation; each documentation: 3 hardcopies as well PDF/DWG files. Documentation in PL and EN version.</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3.6</td>
<td>Delivery of equipment from point 3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3.7</td>
<td>Erection of equipment from point 3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3.8</td>
<td>Commissioning of equipment from point 3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>OSCILLATOR - NECESSARY ACCOMPANYING INFRASTRUCTURE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1</td>
<td>Oscillator: hydraulic or electric remotely adjustable stroke and frequency from 100-300 strokes/min and stroke length of total amplitude: 4+15mm (+/- 2 x 7,5mm)</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>4.2</td>
<td>Necessary accompanying infrastructure for 2 years</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4.3</td>
<td>Delivery of equipment from point 4</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>WATER COOLING RING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1</td>
<td>Water cooling ring for zone 1, length ~0,4 m</td>
<td>8</td>
<td>The length of water cooling ring to discuss with bidder. Please note that the design of the cooling rings is not included in the project scope.</td>
</tr>
<tr>
<td>5.2</td>
<td>Modification of foot rolls for each cast format (if necessary)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5.3</td>
<td>Adjustment of the cooling units incl. pumps, pipelines, etc. for new cooling rings</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5.4</td>
<td>Adjustment of the new water cooling rings to the existing automation system</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5.5</td>
<td>Documentation: basic data, basic engineering, detail engineering, operation and maintenance manuals, circuit diagram (if required), operation and maintenance manuals, as-built documentation, other documentation; each documentation: 3 hardcopies as well PDF/DWG files. Documentation in PL and EN version.</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5.6</td>
<td>Delivery of equipment from point 5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5.7</td>
<td>Erection of equipment from point 5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5.8</td>
<td>Commissioning of equipment from point 5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>WATER COOLING RING - NECESSARY ACCOMPANYING INFRASTRUCTURE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.1</td>
<td>Water cooling ring for zone 1, length ~0,4 m</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>6.2</td>
<td>Necessary accompanying infrastructure for 2 years</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>6.3</td>
<td>Delivery of equipment from point 6</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
### STRAND STIRRERS (S-EMS)

#### 7.1 Design features:

- **7.1.1** The S-EMS shall be located right after the foot rolls attached to the mould.

- **7.1.2** Spray cooling of strand is to be installed inside S-EMS in the same intensity as hard cooling of HC-gades must be cooled.

- **7.1.3** All potentially possible incidents such as breakouts within S-EMS coil or/and steel splash on top of S-EMS protection plate and/or pipelines and cables have to be considered and remedy action to be studied and presented in the technical offer. I.e., a removal of the S-EMS single or together with the mould, foot rolls in case of stuck strand must be considered. ArcelorMittal Poland see no other S-EMS removal procedure than to lift the assembly to the top through the oscillator by Overhead crane. It is essential that electrical cables will allow othi or connections can be easily disconnected.

- **7.1.4** The dismantling of all S-EMS and mounting of new ones cannot be longer than 5 h (total time).

- **7.1.5** The S-EMS may be monted on a support structure which will also carry the spray pipes of the present zone 2 attached underneath and integrated rolls to guide the strands and dummy bar.

#### 7.2 Protection of the S-EMS against steel breakout from the caster made from stainless, non-magnetic steel grade

- **7.2.1** Stirrer coil; max. current = 400 A; frequency = 0-50 Hz, S-EMS length = min. 550 mm; with the cooling inside the winding (so called: dry insulation design)

- **7.2.2** Junction box, heat resistance cable etc.

- **7.2.8** Cooling frames (supply of collectors for strand cooling), support and tubes for zone 2a

- **7.2.8.8** Spray tubes for zone 2a - for format 140 sq

- **7.2.9** Spray tubes for zone 2a - for format 160 sq

- **7.2.10** Spray tubes for zone 2a - for format 190x220 mm

- **7.2.11** Spray nozzles for zone 2a

#### 7.3 Electromagnetic strand stirrers (S-EMS):

- **7.3.1** Stirrer coil; max. current = 400 A; frequency = 0-50 Hz, S-EMS length = min. 550 mm; with the cooling inside the winding (so called: dry insulation design)

- **7.3.2** Junction box, heat resistance cable etc.

- **7.3.3** Frequency and current converter

- **7.3.4** Lifting and handling device (telephers)

- **7.3.5** Stirrer coil support frame in the cooling chamber

- **7.3.6** Guiding rolls incl. bearings, etc.

- **7.3.7** Cooling frames (supply of collectors for strand cooling), support and tubes for zone 2A

- **7.4** Cooling water system for S-EMS:

- **7.4.1** Tank incl. Indicators, venting, drainage etc.

- **7.4.2** Pump units incl. AC-motor, coupling frame etc.

- **7.4.3** Valves, monitoring units, instrumentation etc.

- **7.4.4** Water heat exchanger

- **7.4.5** Interconnecting piping

- **7.4.6** Modification for new equipment incl. piping, fittings, etc.

- **7.5** Electrics and automation:

- **7.5.1** Lower voltage power center

- **7.5.2** Power transformer

- **7.5.3** 4kV switchgear for powering 6 / 0.4 kV transformers

- **7.5.4** Standard sensors, actuators and instrumentation

- **7.5.5** Cooling water pumps control box for S-EMS cooling

- **7.5.6** Standard cables

- **7.5.7** Special cables incl. heat resistance cables

- **7.5.8** Electrical installation materials for new equipment

- **7.5.9** Connection of the new equipment to the station S314-BV

- **7.5.10** S-EMS control system incl. monitoring of cooling water conditions

- **7.5.11** Local operator panel for S-EMS

- **7.6** Set of not standard maintenance tools for S-EMS

- **7.7** Documentation:

- **7.7.1** Basic data, basic engineering, detail engineering, circuit diagram (if required), operation and maintenance manuals, as-built documentation, other documentation; each documentation: 3 hardcopies as well PDF/DWG files.

- **7.8** Delivery of equipment from point 7

- **7.9** Erection of equipment from point 7

- **7.10** Commissioning of equipment from point 7

### 8 STRAND STIRRERS (S-EMS) – NECESSARY ACCOMPANYING INFRASTRUCTURE

- **8.1** Protection of the S-EMS against steel breakout from the caster made from stainless, non-magnetic steel grade

- **8.2** Electromagnetic strand stirrers (S-EMS):

- **8.2.1** Stirrer coil; max. current = 400 A; frequency = 0-50 Hz, S-EMS length = min. 550 mm; with the cooling inside the winding (so called: dry insulation design)

- **8.2.2** Junction box, heat resistance cable etc.

- **8.2.3** Stirrer coil support frame in the cooling chamber

- **8.2.4** Guiding rolls incl. bearings, etc.

- **8.2.5** Cooling frames (supply of collectors for strand cooling), support and tubes for zone 2A

- **8.2.6** Spray tubes for zone 2a - for format 140 sq

- **8.2.7** Spray tubes for zone 3a - for format 160 sq

- **8.2.8** Spray tubes for zone 3a - for format 190x220 mm

- **8.2.9** Spray nozzles for zone 2a

- **8.3** Necessary accompanying infrastructure for S-EMS for 2 years incl. pump unit

- **8.4** Delivery of equipment from point 8