

Technical Specification

“Head hardening system for railway rails – HSM Dąbrowa Górnicza – piping installation”

NUMBER : AMP/2022/L/DG/DWD/DWDL-5/30

concerns the project entitled “Reliable and durable in operation, modern railway rails with a length of 120 m, characterized by high mechanical properties, high resistance to cracking and a modified microstructure of the material due to the modernization of the cooling process after rolling”. (project no. POIR.01.01.01-00-0438/17), co-financed from the funds of the European Regional Development Fund and as part of the Smart Growth Operational Program 2014-2020, sub-measure 1.1.1 “Industrial research and development work carried out by enterprises”.

This specification is attached as appendix no 4 to the request for quotation no **3/0438/2022** of 13.06.2022

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1. General introduction

ArcelorMittal Poland S.A. (AMP), as part of its project Reliable and durable in operation, modern railway rails with a length of 120 m, characterized by high mechanical properties, high resistance to cracking and a modified microstructure of the material due to the modernization of the cooling process after rolling” is interested in selecting a supplier for the **modernization of the piping installation for the head hardening line in the scope of:**

- Project implementation (schedule, resources) – performing the service of piping installation assembly of the hardening line at the AMP heavy section mill in Dąbrowa Górnicza based on the provided material and assembly documentation.
- Assembly, installation and measurements
- Participation in commissioning.

Detailed scope of work and deliveries being the subject of the Inquiry No. 3/0438/2022 is presented below in this specification.

ArcelorMittal Poland S.A. (AMP) operates in various branches in Poland, mainly concentrating steel production in Krakow and in Dąbrowa Górnicza and other important production units that are responsible for the production of various types of steel products in Poland.

Due to the Company's obligation to apply the competition principle, this technical specification constitutes a detailed description of the subject matter of the contract allowing for the preparation of tenders by the Bidders.

This specification has been drawn up with the utmost care in order to provide a full, unambiguous and exhaustive description of the subject matter of the contract so as to enable economic operators to determine all their obligations and risks and to calculate the price and other elements of the offer in a responsible way.

All of the purchases, services and supplies which are the subject of this enquiry must be incorporated and cooperate with the existing infrastructure and equipment in the Company and also must meet the same technological standards. Therefore, the need to maintain the same technological conditions and the need to maintain the unification of equipment resulting from the expansion of the existing infrastructure have determined the provisions of this specification. The provisions applied are justified by the need to ensure the smooth running of the project. The provisions indicated do not impose an obligation on Economic Operators to apply the solutions indicated but only inform about minimal parameters and standards. Using certain types of solutions is not obligatory but only exemplary. The indications in relation to the expected technical parameters, as well as indications concerning specific types and manufacturers' names are of a general nature, referring only to sample indications of equivalent products and do not constitute the only acceptable solution. On this basis, the contracting authority shall accept equivalent solutions.

It is expected that the tenderers will submit an offer taking into account the requirements of this Technical Specification.

The offer must be complete in all respects and must include all components / devices necessary to achieve a sound design, operation and maintenance of the installation. The tenderer must read this specification and make sure that the installation is technically feasible and assume full responsibility for the performed piping works.

The Bidder will read the requirements contained in this documentation and will guarantee the performance of assembly works in accordance with good engineering practices and the latest technical knowledge.

The Contractor is required to be familiar with and respect Investor's standards, in particular H&S standards and performance standards (Investor's standards are available at www.arcelormittal.com/poland, tab "FOR CONTRACTORS"). Furthermore, Investor's standards are enclosed with the Contractor's Safety Manual and will be provided to the Contractor by the Investment Purchasing Office. The Contractor is obliged to respect and follow them at all times on a regular basis at all stages of the investment:

Contractor is obliged to respect and follow them at all times on a regular basis at all stages of the investment:

- ST 000 H&S Policy
- ST 001 Insulation
- ST 002 CONFINE SPACE
- ST 003 WORK AT HEIGHT
- ST 004 Railway safety
- ST 005 Audits
- ST 006 VEHICLES AND ROAD TRAFFIC
- ST 007 OVERHEAD CRANES AND LIFING EQUIPMENT
- ST 008 Contractor
- ST 009 Alarm
- ST 010 Safety indicators
- ST 011 Incident/Accident investigation
- ST 012 WORK AT GAZ HAZARDOUS AREA
- ST 014 HIRA (ang. Hazard Identification and Risk Assessment)
- ST 015 Golden Rules
- ST 018 Loading protection
- ST 201 H&S specification
- ST 301 Mobile phones

ATTENTION: In the case of different requirements in subsequent standards and / or standards, consistent with those mentioned above, more stringent standards and / or standards should be applied (more restrictive)!

2. The data for the designing and developing technical offer

2.1. The technical offer will contain the following parts / chapters

- a. Safety plan for the execution of the order - OHS.
- b. General description and information on the offered scope of work.
- c. List of works with the proposed technology of execution.
- d. List of items / works with quantity (estimated).
- e. Exclusions (work for the buyer). Responsibility matrix (eg Job Breakdown clearly defining the scopes of seller and buyer);
- f. Schedule showing milestones.
- g. System Warranties.
- h. List of potential subcontractors broken down by scopes.

2.2. TOPs and utilities parameters

TOPs and utilities parameters are provided in the documents attached to the RFQ. If TOPs are not defined at this stage, they will be defined during tender negotiations. Electrical power supply will be provided in the area of the hardening line installation.

2.3. Description of the current state

Currently there is no head hardening system located in Dąbrowa Górnicza. The main technology supplier will provide accessories / mechanical devices along with assembly documentation on the basis of which the Bidder will make assumptions for this project.

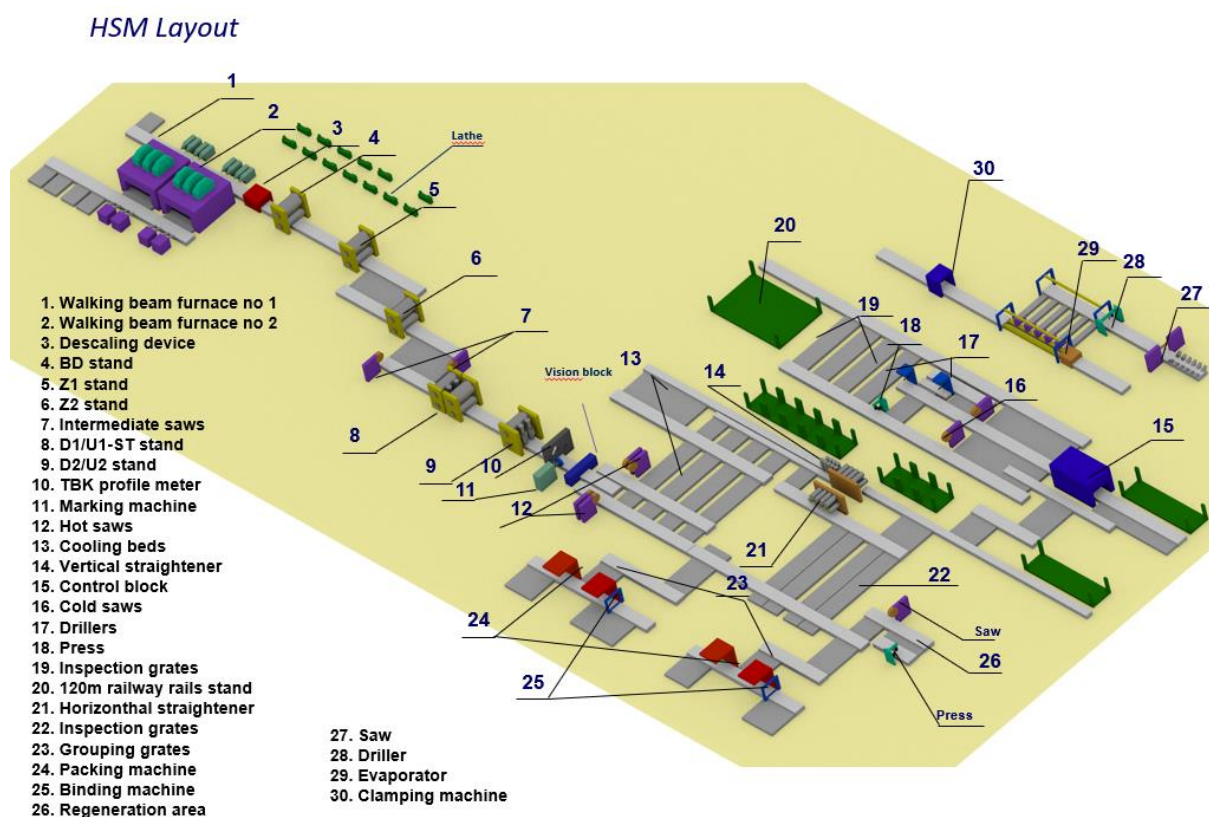
2.4. Project assumptions:

ArcelorMittal Poland S.A. in order to improve the quality of the manufactured rails, it plans to modernize the installation into a rail head hardening line.

Equipment will be provided by the technology supplier. Hardening the rail head will allow to achieve its high mechanical parameters: high wear resistance, fatigue caused by rolling contact, cracking and tensile strength, and high hardness. Straightening the rails in the new vertical straightener will ensure better straightness and minimize residual stresses. The new hardening line will be installed after the last rolling stand and before the hot saws.

The subject of this tender is the installation of piping with the necessary brackets, connection of devices and the performance of tests. It will be the tenderer's responsibility to provide sufficient staff and equipment / tools to complete the work on time. The works will be performed under the supervision of representatives of ArcelorMittal Poland S.A. and a representative of the main technology supplier.

Required that the tenderer's representative must communicate in English. AMP allows the participation of an interpreter hired by the tenderer. The tenderer will install the piping and connect the devices, and the technology provider will carry out start-ups.



Drawing no 1. HSM Layout

Final Acceptance Protocol signing conditions (project closing protocol):

Execution of piping installation on the basis of the provided executive documentation, along with measurements and submission of protocols in accordance with the applicable construction law. The verification will be carried out and confirmed by a three parties - Contractor's representative, AMP's representative, technology supplier's representative - signing the Final Acceptance Protocol. The final verification will take place after checking the functionality of all installed devices. The protocol will be signed after a two-month support period during the hot tests in accordance with point 3.2

3. Bidders' scope of work

The Contractor must ensure H&S supervision over realized works on site. The Contractor or Contractor's representative must be present during a daily meeting during execution phase of the project and on every request of the AMP.

It is required that the Bidder will work 24/7 - all shifts are fully filled.

3.1. The scope of work and deliveries should include the following elements:

1. Providing all necessary tools to perform the work
2. Providing human resources for efficient and timely execution of works.
3. Performing the piping installation on the basis of the documentation provided by the contracting authority – any deviations from the documentation must be approved by the representative of AMP and the technology supplier. In the scope of assembly is:
 - The contractor will submit a declaration, along with the technical offer, that he has read the tender documents for the assembly of the pipeline system for the implementation of the project
 - The contractor must have the implemented standard PN EN ISO 3834-2 "Quality requirements for welding metal materials" or equivalent system
 - The Contractor shall submit the following documents to the Employer no later than one month before the commencement of works:
 - IWE certificate,
 - WPQR,
 - WPS,
 - 3.1 basic materials certificates,
 - Certificates of additional materials 3.1,
 - Inspection and testing plan,
 - Welding plans or maps with the number of NDT tests
 - A list of welders with certificates,
 - List of personnel with NDT qualifications,
 - A list of pressure tests - if required,,
 - Template of the anti-corrosion protection protocol,
 - If the Contractor is planning a workshop production of pipeline elements, he will inform the Purchaser of such fact in advance
 - The Contractor will submit to the Purchaser information on the use of the paint system along with the thicknesses of the applied coatings
 - The Purchaser requires that the components of the pipeline system, i.e. structures, pipelines, suspensions, supports, etc., meet the corrosivity class of min. C4 and a shelf life of over 15 years
 - In the event of a conflict, the Contractor is obliged to prepare the "red correx" documentation and inform the Purchaser. Any changes to the documentation must be approved in writing by AMP's representative, the Contractor and the technology provider
 - If there will be a lot of welding non-conformities Purchaser reserves the right to carry out the so-called "skill tests"
 - Each time before commencing the commissioning, acceptance tests, etc., the Contractor will inform the Purchaser 3 days before the planned date

- Execution of complete pipeline systems together with a measuring system i.e. :
 - Compressed air system - AIR - CA, IA
 - Lubrication system - GR
 - Water system - H2O - CW, CWR, LCS
 - Hydraulic system - HYD - HD, H, HT
 - Polymer system - POL - DR, DW, QU, QUR, DWR, PO, QUT, QUW, TL
 - Pipeline suspensions and supports - SUP
 - Steam system - (LCT) technological steam and steam from the rail foot cooling

- Rinsing, blowing, cleaning and securing the pipelines after assembly, together with the delivery of all auxiliary and temporary materials (plugs, hoses, tees, etc.) necessary for execution and media. Overview materials UPC11F-XA00-P7000-AS100_00 Flushing - will be delivered after signing a confidentiality agreement
- making a welded joint of a 200m³ tank (consisting of two parts)
- The tenderer has made a connection (in terms of piping) of all devices belonging to the rail head hardening system, including devices specified in point 3.1.a of the technical specification, steam extraction system (including condensers)
- The tenderer will supply oil for flushing the installation. The parameters will be transferred after signing the confidentiality agreement
- Delivery of auxiliary materials needed to perform the task, i.e. min. welding and assembly materials, including auxiliary structures, and other materials necessary to complete the task
- Performing all checks and tests, including pressure tests and non-destructive testing (NDT) in accordance with PN-EN13480 and applicable norms / standards
- Insulation of steam and demineralized water pipelines
- Application of anti-corrosion coatings on pipelines made of carbon steel (CS) - painting in accordance with AMP standards ("Visual management, Annex 4 of this specification)
- Provision of equipment necessary to perform the task, including scaffolding, platforms, cranes, etc. A crane with a lifting capacity of 50 tons and an operator will be available. The tenderer must provide his crane operator in addition
- Ensuring engineering supervision and HSE
- Provision of quality documentation for embedded materials - provided by the bidder
- Prefabrication and assembly of brackets and pipe holders within the tenderer's scope
- Marking of pipelines within the scope of the tenderer, in accordance with the AMP standard; designation of the tenderer's supply
- Protection of passages through ceilings and walls within the tenderer's scope - REI120. Delivery of appropriate mass within the scope of the tenderer
- Assumptions for the preparation of the technical / commercial offer will be provided by AMP after signing the NDA contract - documentation, instructions, projections, 3D model, bill of materials, number of welds, etc.
- Other necessary tools / equipment to complete the task
 - Booster pumps for the rail foot hardening system (quantity 3 + 1)
 - Demineralized water tank (quantity 1)
 - Filter system for the hardening system of the rail feet (quantity 1)
 - Hardening tank (No. 1)

- Pumps for the hardening circuit (No. 4 + 1)
 - Filter system for quench recirculation system (quantity 2)
 - Viscometer (quantity 1)
 - Viscometer cooling circuit (quantity 1)
 - Pre-heaters for the hardening recirculation system (quantity 1)
 - Heat exchanger for hardening the recirculation system (quantity 3 + 1)
 - Hardening regeneration tank (quantity 1)
 - Sewage pumps for regenerative systems (quantity 1 + 1)
 - Hardening regeneration circuit filtering system (quantity 1)
 - Pasteurizer (quantity 1)
 - Wastewater pumps of the hardening waste collection system (quantity 1 + 1)
 - Polymer feed pumps (quantity 2)
 - Sewage pumps - sewage / drainage wells (quantity 2)
 - Hydraulic unit (quantity 1)
 - Battery bench (quantity 2)
 - Centralized grease pump (quantity 2)
 - Compressor (quantity 1)
4. The contractor will provide the installation works manager – in accordance with the Polish building law with appropriate qualifications - responsible for confirming the correctness of the works.
 5. In the event of damage caused by the Bidder's fault, the Bidder will repaint or repair the damaged elements at his own expense.
 6. The Bidder or Bidder's representative (Project Manager/Works Manager) will be present at each technical meeting during the project implementation or at AMP's request. The project manager will supervise the correctness of the works related to the piping. He will also inform AMP about the progress of the works. Communication between AMP and the Bidder's representative will be in Polish and English. AMP allows the participation of an interpreter employed by the Bidder.
 7. The Bidder undertakes to participate in inter-branch coordination meetings prior to the commencement of piping assembly works, in order to establish a detailed work schedule.
 8. During the 2-month hot test, the Bidder will ensure the participation of 2 people for 3 days each week (Monday to Friday). For the purposes of the offer, the Bidder will assume the working time between 06:00 - 18:00. These people will be responsible for support in the field of refastening, removing leaks, etc. the correctness of the tests.
 9. The Bidder is requested to submit a technical offer in Polish. In the event of any discrepancy between the specification and the offer prepared in Polish or in English, the Polish version shall prevail.
 10. Transport from the central warehouse and unloading of devices at the assembly site on the side of the Bidder with the participation of AMP representative. Storage of the delivered materials in accordance with the instruction AMP18_DPC1Y5013R_P_SECTION 18.
 11. Utilization and disposal of the generated waste on the side of the Bidder.

3.2. Plan of handover and tests:

1. Checking of installed equipment and quality of performed works:
 - a. Supervision over the installation and checking the number of built-in equipment specified in the "Technical Specification" and the approved technical offer.
 - b. Supervision over the installation and checking the quality of all works specified in the "Technical Specification" and the approved technical offer.
 - c. Signing the protocol confirming the scope and quality of the works performed by the installation company. The protocol will be signed trilaterally by the representative of AMP, the supplier of the hardening technology and the representative of the company performing the installation and assembly. The report confirms the correctness of the installation by the Contractor.

2. Hot tests /with material /:
 - a. During the hot tests performed by the main technology supplier, verification of all installed devices will be carried out, which will be the basis for signing the Final Acceptance Protocol.
 - b. During the 2-month hot test, the Bidder will ensure the participation of 2 people for 3 days each week (Monday to Friday). For the purposes of the offer, the Bidder will assume the working time between 06:00 - 18:00. These people will be responsible for support in the field of refastening, removing leaks, etc. the correctness of the tests.

4. Time of work completion

1. The works specified in these technical specifications will be performed in Q4 2022 plus additional 2 months for participation in hot tests.
2. A preliminary schedule will be attached to the offer, containing a specific time frame in which the Bidder will provide the Investor with the assembly and work plan.

Assumptions for the assembly schedule:

- a. Installation prior to shutdown of the Heavy Section Mill: 31 days from the final date of commencement of assembly
Estimated date of shutdown of the heavy section mill: November 2022.
 - b. Installation with HSM shutdown: next 23 days
 - c. From the commencement of assembly, AMP assumes full assembly of the accessories that do not interfere with the production line for 31 days, the next 23 days for the assembly of accessories that require stoppage of the production line
 - c. After 54 days from the commencement of assembly, the main technology supplier is scheduled to start cold tests.
3. The schedule will be prepared after mutual agreement before concluding the contract. The schedule will be guaranteed by the Bidder and will constitute part of the commercial provisions indicated in the Commercial Offer.

4. Schedule:

Estimated date of shutdown of the rolling mill: November 2022 , start of works that do not interfere with the production line. Information about the possibility of starting work will be provided two weeks in advance. Installation prior to shutdown of the Heavy Section Mill: 31 days from the final date of commencement of assembly.

After 31 days, the standstill of the rolling mill - execution of assembly works interfering with the line

Completion of work - after 54 days

Commissioning: checking the functionality of all installed devices - completion of hot tests, February 2023.

The contracting authority reserves the right to make the final decision on the date of commencement of works and the stoppage of the heavy section mill.

5. Guarantee and warranty of delivery and execution quality

1. The tenderer will guarantee high quality of work
2. The required warranty period, counted from the signing of the Final Acceptance Protocol: 24 months.
3. Required response time - visit of the contractor's representative at the AMP rolling mill in Dąbrowa Górnicza to report a bug, outside the days of hot tests - up to 24 hours; in the scope of 24/7..
4. During the warranty period, the service response time to reporting a failure - up to 24 hours, removal of a defect - up to 48 hours.
5. Removal of a failure in the event of an event due to the fault of the Contractor during hot tests: up to 36h.
6. The required service availability in Polish and the possibility of reporting the defect by e-mail.
7. The contractor must attach to the technical offer the procedure of reporting failures requiring service intervention.

6. Quality, workmanship, tests and control

The Buyer reserves the right to inspect the performed works (by himself or by authorized person), and in the event of claims regarding the quality of the assembly performance - he may require the Bidder to make changes or improve the work performed in accordance with the submitted comments.

7. Price

Price should be given for whole scope of work as detailed as possible. All elements should be divided into groups and described with a short identification. Price part of the offer should be executed based on the instruction delivered with RFQ or according to guidelines from Purchase Department.

8. Contact data

Project Manager:

1. Zbigniew Gryt +48 668 860 133 Zbigniew.Gryt@arcelormittal.com

Detailed technical consultation will be provided by:

2. Robert Sidło +48 668 021 584 Robert.Sidlo@arcelormittal.com
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4. Piotr Nabielski +48 608 695 474 Piotr.Nabielski@arcelormittal.com

Approved by	Position	Date	Signature
Zbigniew Gryt	Project Manager		
Robert Sidło	Senior Project Manager		
Tomasz Dzierżawczyk	HSM Manager		
Piotr Nabielski	HSM Manager		

Appendix no 1: Location, Environmental data

Table 1. Location

Latitude	50°19'05"N
Longitude	19°14'14"E
The nearest agglomeration	Katowice
The nearest airport	Katowice-Pyrzowice (18 km)

Table 2. Environment-related data

DATA	VALUE
Max. temperature	36.0°C (historical value)
Min. temperature	-27.4°C (historical value)
Average annual temperature	8.4°C
Average yearly precipitation	671 mm
Highest monthly precipitation	94 mm
Average wind speed	1.7 m/s
Max. wind speed	3,4 - 5,5 m/s
Elevation above sea level	272 m

Appendix no 2: Legal acts to be observed in the course of project implementation on the premises of ArcelorMittal Poland S.A.

Building Law:

- The Act of 7 July 1994 - Building Law (Journal of Laws of 2017, item 1332).
- The Act of 18 July 2001 - Water Law (Journal of Laws of 2017, item 1121).
- The Act of 10 April 1997 - Energy Law (Journal of Laws of 2017, item 220).
- Regulation of the Minister of Transport, Construction and Maritime Management of 25 April 2012 on detailed scope and form of a construction design (Journal of Laws of 2012, Item 462).
- Regulation of the Minister of Infrastructure of 2 September 2004 on detailed scope and form of design documentation, technical specifications for performance and acceptance of civil works and the functional utility programme (Journal of Laws of 2013, Item 1129).
- Regulation of the Minister of Infrastructure and Construction of 24 August 2016 on template application for a building permit or demolition permit, notification of construction and reconstruction of a single-family residential building, statement of the right to dispose of real estate for construction purposes and decision of a building or demolition permit (Journal of Laws of 2016, Item 1493).
- Regulation of the Minister of Transport, Construction and Maritime Management of 25 April 2012 on establishing geotechnical conditions for positioning building structures (Journal of Laws of 2012, Item 463).
- Regulation of the Minister of Infrastructure of 30 August 2004 on the conditions and procedure related to dismantling of unoccupied or unfinished building facilities (Journal of Laws of 2004 No 198 Item 2043).
- Regulation of the Minister of Infrastructure and Development of 16 October 2015 amending the regulation on construction logbook, assembly and demolition, the information board and notice including occupational safety and health details (Journal of Laws of 2015, Item 1775).
- Regulation of the Minister of Infrastructure of 19 November 2001 on types of building facilities whose construction requires appointment of an owner's representative (Journal of Laws of 2001 No 138 Item 1554).

Spatial planning regulations (depending on the location):

- The Act of 27 March 2003 on Spatial Planning and Management (Journal of Laws of 2017 Item 1073).
- Regulation of the Minister of Infrastructure of 26 August 2003 on the required scope of the project of the local plan of spatial development (Journal of Laws of 2003 No 164 Item 1587).

- Regulation of the Minister of Infrastructure of 26 August 2003 on the method of determining the requirements of new construction and land development (Journal of Laws of 2003 No 164 Item 1588).
- Regulation of the Minister of Infrastructure of 26 August 2003 on the signs and terminology used in a decision on location conditions of a public investment project and decision on conditions of land development (Journal of Laws of 2003 No 164 Item 1589).

Geodetic requirements:

- Geodetic and Cartographic Law of 17 May 1989 (Journal of Laws of 2016, Item 1629).
- Regulation of the Minister of Spatial Development and Construction of 21 February 1995 on the type and scope of geodetic and cartographic documents and geodetic acts mandatory in the construction sector (Journal of Laws of 1995 No 25 Item 133).

Building products:

- The Act of 16 April 2004 on construction products (Journal of Laws of 2016, item 1570).
- Regulation of the Minister of Infrastructure and Construction of 17 November 2016 on national technical assessment (Journal of Laws of 2016 Item 1968).

Technical and construction regulations and conditions

- Regulation of the Minister of Infrastructure of 12 April 2002 on technical conditions to be satisfied by buildings and their location (Journal of Laws of 2015 Item 1422).
- Regulation of the Minister of Economy of 26 April 2013 on technical conditions to be satisfied by gas networks and their location (Journal of Laws of 2013 Item 640).
- Regulation of the Minister of Transport and Maritime Management of 10 September 1998 on technical conditions to be satisfied by railway structures and their location (Journal of Laws of 1998 No 151 Item 987).
- Regulation of the Minister of Infrastructure of 25 June 2003 on the method of notifying and marking air obstacles (Journal of Laws of 2003 No 130 Item 1193).
- Regulation of the Minister of Transport and Maritime Management of 2 March 1999 on technical conditions to be satisfied by public roads and their location (Journal of Laws of 2016, Item 124).
- Regulation of the Minister of Economy of 21 October 2008 on essential requirements for machines (Journal of Laws of 2008 No 199 Item 1228).

Major directives:

- Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machines.
- Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits.

Equipment and facilities subject to technical supervision

- Regulation of the Council of Ministers of 7 December 2012 on types of technical facilities subject to technical supervision (Journal of Laws of 2012 Item 1468)
- Regulation of the Minister of Economy, Labour and Social Policy of 9 July 2003 on technical conditions of technical supervision in respect of operation of certain pressure equipment (Journal of Laws of 2003 No 135 Item 1269).
- Regulation of the Minister of Economy, Labour and Social Policy of 29 October 2003 on technical conditions of technical supervision in respect of operation of certain handling equipment (Journal of Laws of 2003 No 193 Item 1890).

Regulations on harmonised standards:

- The Act of 12 September 2002 about standardisation (Journal of Laws of 2015 Item 1483).
- Announcement of the Chairman of the Polish Committee for Standardisation of 30 July 2012 on the list of harmonised standards M.P.2012.612
- Regulation of the Council of Ministers of 23 December 2002 on the manner of operation of the national system of notification of standards and legal acts. (Journal of Laws of 2002 No 239 Item 2039).

Occupational health and safety:

- Regulation of the Minister of Labour and Social Policy of 26 September 1997 concerning the general occupational safety and health provisions (Journal of Laws of 2003 No 169 Item 1650).
- Regulation of the Minister of Infrastructure of 23 June 2003 on information related to health and safety, and health and safety plan (Journal of Laws of 2003, No 120, Item 1126).
- Regulation of the Minister of Infrastructure of 6 February 2003 concerning occupational safety and health during construction works (Journal of Laws of 2003 No 47 Item 401).
- Regulation of the Minister of Economy of 20 September 2001 concerning occupational safety and health during operation of machines and other technical equipment for ground, construction and road works (Journal of Laws of 2001 No 118 Item 1263).
- Regulation of the Minister of Economy of 28 March 2013 concerning occupational safety and health during work with power equipment (Journal of Laws of 2013 Item 492).
- Regulation of the Minister of Economy of 8 July 2010 on minimum requirements for occupational safety and health related to the possibility of occurrence of explosive atmosphere at the workplace (Journal of Laws of 2010 No 138 Item 931).
- Regulation of the Minister of Economy of 14 July 2010 on occupational safety and health in the iron and steel industry (Journal of Laws of 2010 No 142 Item 951).

Fire protection

- The Fire Protection Act of 24 August 1991 (Journal of Laws of 2017 Item 736)
- Regulation of the Minister of Internal Affairs and Administration of 2 December 2015 on approval of a construction design in terms of fire safety (Journal of Laws of 2015 Item 2117)
- Regulation of the Minister of Internal Affairs and Administration of 7 June 2010 on fire safety of buildings, other construction facilities and premises (Journal of Laws of 2010 No 109, Item 719).
- Regulation of the Minister of Internal Affairs and Administration of 24 July 2009 on fire fighting water supply and fire roads (Journal of Laws of 2009 No 124 Item 1030).

Sanitary regulations

- The Act of 14 March 1985 on State Sanitary Inspection (Journal of Laws of 2017 Item 1261).
- Regulation of the Minister of Health of 29 November 2002 on experts of sanitation and hygiene (Journal of Laws of 2002 No 210 Item 1792).

Environmental protection

- The Act of 27 April 2001 - Environmental Law (Journal of Laws of 2017, item 519)
- The Act of 3 October 2008 on the provision of information on the environment and its protection, public participation in environmental protection and environmental impact assessments (Journal of Laws of 2017 Item 1405).
- The Act of 14 December 2012 on waste (Journal of Laws of 2016 Item 1987).
- Regulation of the Council of Ministers of 9 November 2010 on projects which may materially impact the environment (Journal of Laws of 2016 Item 71)
- Regulation of the Minister of Environment of 14 June 2007 on permissible level of noise in the environment (Journal of Laws of 2014, item 112)
- Regulation of the Minister of Environment of 2 July 2010 on situations where no permit is required to discharge gases or dusts to the atmosphere (Journal of Laws of 2010 No 130 Item 881).

Management systems and standards

- Occupational Health and Safety Management System BS OHSAS 18001:2007 / PN-N-18001:2004.
- Environmental Management System EN ISO 14001: 2015
- Energy Management System EN ISO 50001: 2011
- Quality Management System ISO 9001: 2015
- Quality management standard for the automotive industry IATF 16949: 2016

Other

- The Personal Data Protection Act of 29 August 1997 (Journal of Laws of 2016 Item 922).
- The Act of 13 April 2016 on conformity assessment systems and market supervision (Journal of Laws of 2017, item 1398).
- The Act of 4 February 1994 on copyright and related rights (Journal of Laws of 2017 Item 880).

International technical standards:

CEN	European Committee for Standardization;
CENELEC	European Committee for Electrotechnical Standardization;
DIN	Deutsche Industrie Normen;
EN	European Standard;
ETSI	European Telecommunications Standards Institute;
ISO	International Organization for Standardization;
PN	Polish Norms;

Should discrepancies occur between PN standards and the above mentioned ones, the stricter standards shall apply.

The bidder is required to familiarise with the standards of ArcelorMittal Poland S.A. in respect OHS rules and performance standards which shall be observed by the contractor at all times.

Appendix no 3: File formats for the documentation - standard acc. to ArcelorMittal Poland S.A.

1. Documents: *.doc, *.pdf, *.xls (Microsoft Word 2010, Microsoft Excel 2010, Adobe Reader)
2. Schedules: *.mpp (Microsoft Project 2010)
3. Mechanical documentation: *.dwg, *.dwf (AutoCAD ver. 13 or higher, Autodesk Design Review) and *.pdf
4. Electrical documentation: *.zw1 (EPlan P8) and *.dwg ; *.pdf
5. Civil: *.dwg, *.dwf (AutoCAD ver. 13 or higher, Autodesk Design Review) and *.pdf
6. Picture, figures: *.jpg

Appendix no 4: Visual management

Visual management is a series of practices that make it possible for a plant to work faster, more efficiently and more safely, and that maintenance work can be more efficient.

Visual management elements that should be applied to the device and in its area:

- Numbering, visualization of equipment review points for the Autonomous Maintenance Group (according to the AUR review checklist),
- Designation of the piping system and piping with the appropriate color,
- Description of the installation and piping referring to the transported medium and direction of flow, Note - All descriptions on the device must be in Polish,
- Marking of LOTO energy cut-off points, accessories for attaching locks,
- Marking of working ranges of manometers, direction of rotation of electrical machines, oil levels in tanks.
- Marking of grease and oil dispensing points according to the Standards and OPLs used in the Plant,
- Marking of electrical equipment, cables and wires, terminal strips,
- Descriptions of desktops, buttons, control lights - metal, engraved,
- Marking open closed valves,
- Marking of moving and protruding elements of equipment, guards and barriers,
- Marking of pedestrian route according to the marking system used on the Plant
- Railing of hazard zones and placement of warnings signs.
- Platforms and covers, well fitting, adhering, secured against moving, with information about the maximum load capacity.

1) Piping system designation in color depending on the medium being transported:

- Air - bright blue
- Gases (natural gas, coke oven gas, argon) - yellow
- Oxygen - white
- Compressed air - gray
- Water - green
- Oils and flammable liquids (hydraulic oil) - brown
- Acids and bases - purple
- Other liquids - black



2) Description in Polish of the installation and piping of the conveyed medium and flow direction in accordance with the following examples:



3) Marking of LOTO energy cut-off points and accessories for locking devices.



4) Marking of working ranges of manometers, direction of rotation of electrical machines, oil levels in tanks.

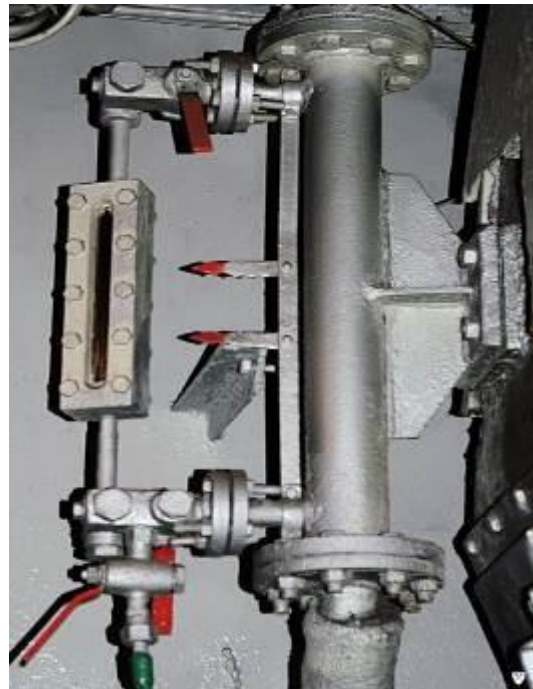
a. Marked working range



b. Marked direction of rotation

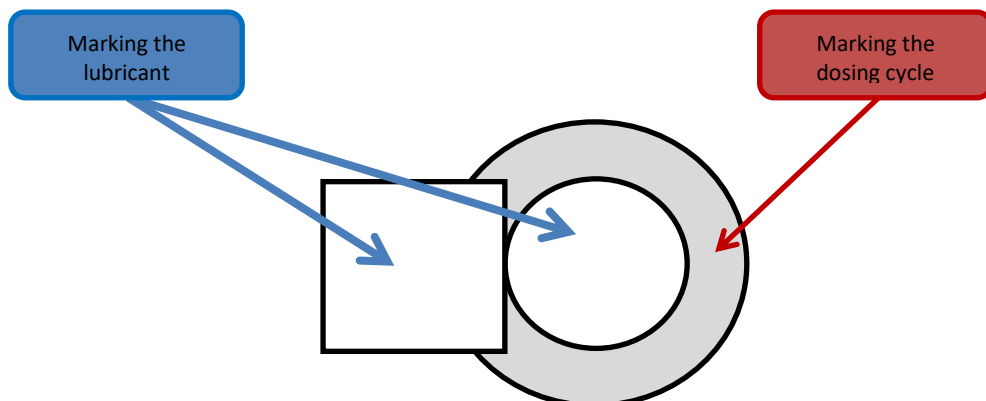


c. Optimal oil level range marked.

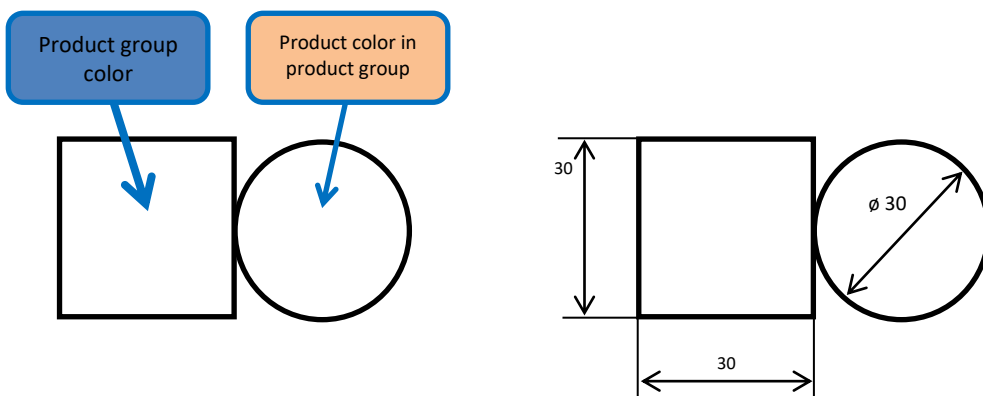


5) Marking of grease and oil dispensing points (on tanks, pumps, grease injection points, etc.)

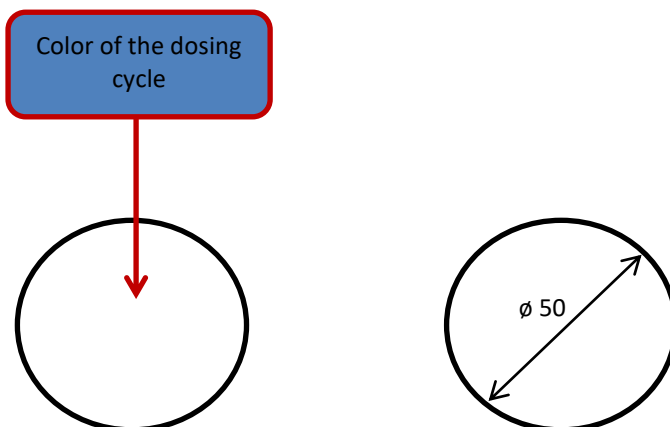
a. Marking pattern



b. Details of lubricant labeling





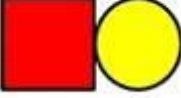

c. Marking the dosing cycle






6) Marking of lubricant and oil dosing points.
The colors of the individual markings will be assigned to the metering points after receiving the exact specification of the device

a. Examples of lubricant markings

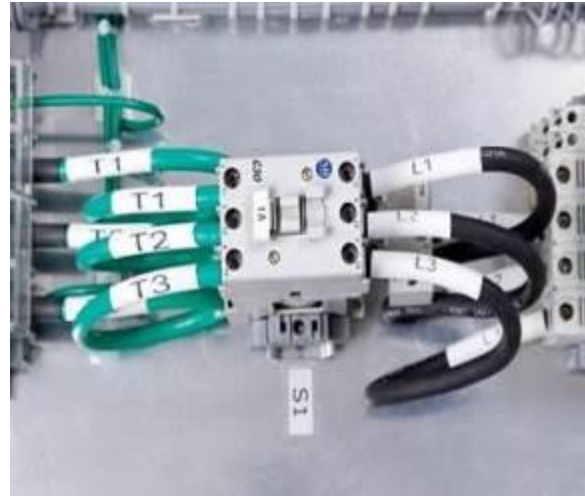


Lubricant product	Sign and color of lubricant product
Hydraulic oil Renosafe DU 46	 black (#000000) - white (#FFFFFF)
Hydraulic oil QuIntolubric 888-68	 black (#000000) - blue (#0000FF)
Gear oil Mobilgear 600 XP 100	 red (#FF0000) - yellow (#FFFF00)
Gear oil Mibilgear 600 XP 220	 red (#FF0000) - red (#FF0000)

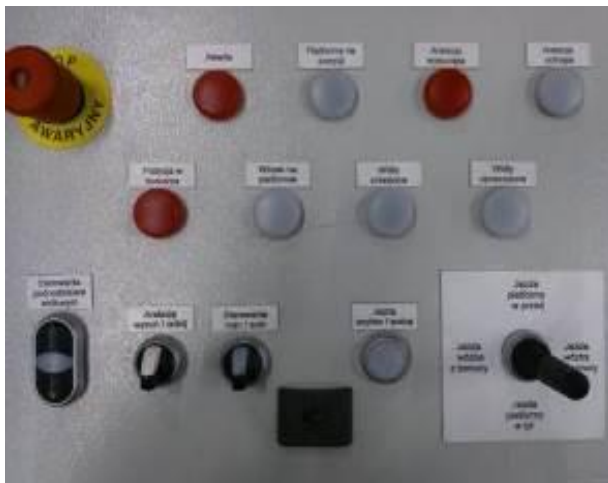
b. Examples of dosing cycles

Name of the cycle	Designation and color of the cycle
every 1 week	 green (#008000)
every 1 month	 white (#FFFFFF)
every 3 month	 red (#FF0000)

- 7) Marking of electrical appliances, cables and wires, terminal strips and blocks according to the indications in the wiring diagrams:



- 8) Descriptions of devices, desktops, buttons, control lights - metal, engraved



9) Protection of devices against unauthorized activation (for example key switch etc.)



10) Marking of moving and protruding elements of equipment, shelter and barriers.



11) Railing of security zones and placement of warnings signs.



12) Platforms and covers, well fitting, adhering, secured against moving, with information about the maximum load capacity

