

APPENDIX I.B

Revision 3 – March 2022

ENVIROMENTAL AND ENERGY EFFICIENCY REQUIREMENTS¹

ENGINEERING MANAGEMENT OF ASTURIAS CLUSTER

REV-03	Regulation and certificates updated. New chapter for waste management

¹ English version. This is an English translation exclusively for informative purposes. The Spanish version shall prevail to all legal purposes



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1. INTRODUCTION

As part of its environmental commitment, ArcelorMittal is certified in the standards:

- ISO 14.001, Environmental management
- ISO 50.001, Energy management
- Responsible Steel

These certifications imply some requirements to be fulfilled by ArcelorMittal that must be satisfied by our suppliers. The purpose of this Annex is the notification to suppliers of the requirements that they must comply with in their technical offers and subsequent execution of services and or works.

2. APPLICABLE REGULATIONS

Non-exhaustive mandatory list of laws and regulations.

- Law 26/2007 related to environmental responsibility
- RD 833/1988 related to waste regulation
- RD 9/2005 related to potentially polluting activities for the soil
- RD 105/2008 related to production and management of construction and demolition waste.
- Law 22/2011 of waste and polluting soils.
- RD 180/2015 related to waste transport inside the national territory
- RD 56/2016 related to energy efficiency.
- RD 1027/2007 related to Thermal facilities in buildings (RITE)
- Decree 11/2015 related to RITE
- RD 390/2021 related to energy efficiency certification for buildings
- RD 1390/2011 related to energy efficiency labelling
- RD 1427/1997 related to petrol products facilities for own use
- RD 187/2011 ecological design for energy related products
- RD 314/2006 technical code of building
- RD 1890/2008 related to Outdoor lights
- RD 244/2019 related to energy self-supply
- Regulation 1253/2014/UE related to eco-design requirements for ventilation units
- Regulation 2017/1369/UE related to energy labelling
- Regulation 548/2014/UE related to power transformers



- Regulation 2019/1781/UE related to ecodesign requirements for electric motors and variable speed drives
- Regulation 2019/1782/UE related to ecodesign for external power supplies
- Regulation 2019/1784/UE related to ecodesign for welding equipment
- Regulation 2019/2019/UE related to ecodesign for refrigerating appliances
- Regulation 2019/2020/UE related to ecodesign for light sources and separate control gears.
- Regulation 2019/2021/UE related to ecodesign for electronic displays
- Regulation 617/2013/UE related to ecodesign for computers and servers
- Regulation 640/2009/UE related to ecodesign for electric motors
- Regulation 641/2009/UE related to ecodesign for glandless standalone circulators and glandless circulators integrated in products
- Regulation 2019/1781/UE related to ecodesign for electric motors and variable speed drives
- Regulation 813/2013/UE related to ecodesign for heaters
- Internal ArcelorMittal regulations:
 - IT-SGA-0501, hazardous waste management
 - IT-SGA-0502, hazardous waste management with GOGERSA
 - IT-SGA-0503, waste management with dolomite quarry landfill
 - IT-SGA-0504, waste management of non-hazardous, inert or similar to urban waste.
 - IT-SGA-0508, Management of electric and electronic waste.
 - IT-SGA-0509, hazardous waste labelling
 - IT-SGG-0101, Soil characterization and soil exceed management
 - IT-SGG-0102, Specific environmental plan
 - PG-SG-08, contractors and suppliers control
 - PG-SGA-11, transportation and management of hazardous and non-hazardous waste between Autonomous Communities in Spain
 - PG-SGG-01, Environmental and/or energy requirements in new facilities.
 - PG-SGG-11 related to contractors and suppliers control

It will be considered mandatory any modification suffered by the current laws, even if those modifications are not included in the previous list.

3. HUMAN RESOURCES FOR ENVIRONMENTAL MANAGEMENT



Environmental management will involve all contractor employees. The appointed person as contract responsible will also assume the maximum responsibility in the management of waste and environmental incidents for which the contractor company is responsible during the works execution.

The contractor company must provide the human resources to achieve site surveillance and documentary work. This work must be developed by personnel with full dedication for works in the factories of ArcelorMittal Asturias.

Assigned staff to environmental management could perform other functions and/or be responsible for several sites if a correct environmental management is guaranteed. ArcelorMittal reserves the right to demand the appointment of full-time staff for environmental management in each site if during the execution of the work it's observed that daily management, development of the work and/or documentary management are deficient.

One of the actions that ArcelorMittal considers most important is the contact with the people that work on site, this implies the entire chain of command of the contractor company. In this sense, we want to guarantee the correct development and document management through the Environmental Management Plan (PGMA), where the actions to be carried out will be detailed.

4. REQUIREMENTS FOR WORKING FOR ARCELORMITTAL

- Have an environmental management system
- Have a staff properly formed in environmental management
- Fulfil environmental laws and regulations
- Fulfil ArcelorMittal internal regulations
- Elaborate an offer that fulfil all these Annex requirements

5. STEPS FOR WORKS EXECUTION

- Specific plan for environmental plan (PEGA)
- Monitoring and control works by contractor company under its scope
 - Perform environmental inspections (once a week minimum)
 - Perform environmental audits (once a month minimum)
 - Waste management according to applicable legislation.
 - File all documents related to hazardous and non-hazardous waste management



6. ENVIRONMENTAL MANAGEMENT

- Specific plan for environmental management
- Contractor must manage its own hazardous and non-hazardous waste through an authorized waste manager
- The contractor will inspect each of its sites once a week at least, in relation to environmental issues
- File all documents related to
 - Contractor hazardous waste
 - Contractor non-hazardous waste
- For works where a concrete lorry-mixer or concrete pumps are needed, it must be defined and conditioned a specific area for cleaning that machinery.
- If a mortar silo is required, the installation area must be conditioned prior to the silo installation.
- All laws and ArcelorMittal internal regulations related to environmental management are mandatory.

7. WASTE MANAGEMENT

The contractor will be responsible of their own wastes (packaging, wood, steel scrap, recipients, etc), which will be manage throw a waste manager.

In the event that work scope includes the management of ArcelorMittal waste (structure, old equipment, isolation, concrete, etc) the contractor has to be registered as waste agent (“agente de residuos”) under Art. 3.I of Law 22/2011.

8. ENVIRONMENTAL RISK ANALYSIS

The bidding to whom the contract is awarded must perform environmental risk analysis during construction and operating facility phases.

8.1. Environmental risk during construction phase

The offer awardee must perform the Specific Environmental Management Plan (PEGA) according to the document IT-SGG-0102. The document must include the analysis of environmental risks of construction works and their environmental consequences.



8.2. Environmental risk during operating time

The offer awardee must list possible operating, structural, mechanical and/or software failures of the new facility or equipment including the consequences of this failure according to their knowledge of ArcelorMittal facilities. This document will be the source for the updated of ArcelorMittal environmental risk analysis document (ARA).

Failure list during operating time will be part of final project documentation and will be takes into consideration in payment deadline including in Appendix I-C of this technical specification.

9. ENERGY EFFICIENCY

9.1. Offer

In order to obtain a suitable assessment for energy efficiency of the equipment and/or facilities included in the offer, the provided information will include projected values in the following tables:

STIMATED FUEL CONSUMPTION (LIQUIDS AND GASES)				
ITEM	FUEL	POWER [kW]	COMPSUNPTION G [Nm ³ /h] / LQ [l/h]	PERFORMANCE

REQUIRED ELECTRICITY, FLUIDS, AND GAS FLAMABLE GASES					
ITEM	SUPLY	POWER [Kw]	FLOW [Nm ³ /h]	PRESSURE [bar]	TEMPERATURE [°C]

Non-exhaustive list of examples for different considered supplies and its measure units:

Combustibles

- Combustibles gases, flow [Nm³/h] and pressure [bar]
 - Natural gas
 - Propane
 - Coke oven gas



- Blast furnace gas
- LD gas
- Other gases and mixes of previous gases
- Liquid combustibles [l/h]
 - Petrol
 - Gas oil
 - Others

Energy supplies

- Electricity power [kW]
- Hydraulic power (pressure [bar] y flow [m³/h])
- Compressed air (pressure [bar] y flow [Nm³/h])
- Nitrogen (pressure [bar] y flow [Nm³/h])
- Oxygen
- Steam

The offer shall expressly indicate an analysis of the expected life cycle for equipment and/or facility under this technical specification. The analysis will include the expected consumption for each energy source included in this Annex.

9.2. Final documentation

After the works are ended, the final documentation will include an Annex in Spanish language under the title “Eficiencia energética” which will include all information related to the consumption and efficiency of individual installed equipment and all required supplies for their normal operation.

9.3. Mechanical and electrical equipment

The annex will include a list with the following electrical and mechanical equipment:

- Electrical motors and power transformers
- Combustion engines
- Hydraulic and pneumatic motors
- Pumps and compressors

ELECTRICAL AND MECANICAL EQUIPMENT				
ITEM	EQUIPMENT	POWER [kW]	VOLTAGE [V]	PERFORMANCE



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9.4. Energy consumption

The annex will include a list of real energy consumptions of the built facility which will include those that apply from the following:

- Hydraulic power [l/h]
- Electrical power [kW]
- Natural gas (GN) [Nm³/h]
- Propane [Nm³/h]
- Coke oven gas (GDC) [Nm³/h]
- Blast furnace gas (GHA) [Nm³/h]
- LD gas (GLD) [Nm³/h]
- Compressed air [Nm³/h]
- Steam
- Nitrogen [Nm³/h]
- Oxygen [Nm³/h]
- Argon [Nm³/h]

ENERGY CONSUPTION OF THE FACILITY (LÍQUIDS AND/OR GASES)					
ITEM	ENERGY	POWER [kW]	CONSUPTION G [Nm3/h] / LQ [l/h]	PRESSURE [bar]	TEMPERATURE [°C]