CBAM Monitoring Plan

Cover information

Project name	Test Metal Processing ADVANCED
Company name	Advanced Steel Serbia d.o.o.
CBAM sector	Iron and Steel
Country	Serbia
Monitoring Plan level	ADVANCED
Monitoring Plan version	1.0
Issue date	21.06.2026

1. Installation description

The installation **Advanced Steel Serbia Rolling Mill** is located in **Smederevo**, **Serbia**.

The installation address is: **Industrial Zone, Smederevo**.

The installation operates a steel rolling mill producing steel reinforcing bars from externally purchased semi-finished steel billets. The main process steps include receipt and storage of billets, reheating in a natural gas fired reheating furnace, hot rolling, cooling, cutting, bundling and dispatch.

Direct CO_2 emissions arise from the combustion of natural gas in the reheating furnace. The installation does not produce crude steel, pig iron or direct reduced iron on site.

The monitoring boundary includes purchased steel billets as precursors, natural gas consumption for the reheating furnace, production quantities of finished reinforcing bars, calculation factors, measurement devices, laboratory analyses, data flow activities and QA/QC controls.

2. CBAM goods and CN codes

The following CBAM goods are covered by this Monitoring Plan. Product identification is based on CN classification and annual production data provided by the operator.

Commercial Product Name	CBAM Product	CN Code	Annual Production	Functional Unit
Steel reinforcing bars B500B	Bars and rods, of iron or non-alloy steel, with indentations, ribs, groves or other deformations produced during the rolling process	72142000	28000	tonnes of goods

3. Production processes and routes

The production routes covered by this Monitoring Plan are listed below. Each route is linked to the relevant CBAM goods and describes the main process steps within the installation boundaries.

Route Name	Route Type	Products Covered	Description
Hot rolling of purchased steel billets	Steel processing	Bars and rods, of iron or non-alloy steel, with indentations, ribs, groves or other deformations produced during the rolling process / CN 72142000	Purchased semi-finished steel billets are reheated in a natural gas fired reheating furnace and processed through a hot rolling line to produce reinforcing bars. Finished bars are cooled, cut to length, bundled and stored for dispatch.

4. Source streams

The following source streams are included within the monitoring boundaries of the installation. Source streams are used to identify relevant inputs, fuels, electricity consumption and precursor materials for the determination of embedded emissions of CBAM goods.

Stream ID	Source Stream	Type	Linked Production Route	Unit
SS1	Natural gas for reheating furnace	Fuel	Hot rolling of purchased steel billets	Nm3
SS2	Purchased steel billets	Precursor	Hot rolling of purchased steel billets	t

5. Measurement devices

Monitoring data are obtained using the measurement devices listed below. The operator maintains records of calibration, maintenance and performance checks where applicable.

Instrument ID	Type	Source Stream	Location	Measured Quantity	Unit	Range	Uncertainty ±%	Typical Use
MD-01	Flow meter	SS1	Natural gas inlet to reheating furnace	Natural gas consumption	Nm³	0 – 2500	1.5	150-1000
MD-02	Weighbridge	SS2	Raw material receiving area	Steel billet quantity	t	0 – 60000	0.5	2000-3000

6. Calculation factors

The following calculation factors are applied for the determination of activity data, direct emissions, indirect emissions and embedded emissions where relevant. Calculation factors may be based on default values, supplier information, laboratory analysis or other documented sources.

Factor ID	Source Stream	Parameter	Value	Unit	Source	Evidence
CF-01	SS1	NCV	0.0342	TJ/1000 Nm³	Supplier gas quality certificate	Gas quality certificate GQ-2026-01
CF-02	SS1	Emission Factor	56.1	tCO_2/TJ	Laboratory analysis / national inventory default	Laboratory report LAB-NG-2026-01
CF-03	SS1	Oxidation Factor	1.0	dimensionless	Conservative default	Monitoring methodology

7. Laboratories and analysis methods

The following laboratories and analysis methods are used for determining calculation factors and other relevant monitoring parameters. The operator retains evidence of accreditation, analysis reports, internal methods or validation records where applicable.

Lab ID	Laboratory Type	Laboratory Name	Parameter	Analysis Method	ISO/IEC 17025	Evidence
LAB-01	External laboratory	Accredited Gas Analysis Laboratory Ltd	NCV	ISO 6976 – calculation of calorific values from gas composition	Yes	Accreditation certificate ACC-17025-2026 and laboratory report LAB-NG-2026-01

Additional laboratory and analysis method notes

- **LAB-01:** The laboratory performs periodic verification of natural gas composition and net calorific value. Supplier gas quality certificates are reconciled with laboratory reports.

8. Precursors

The following precursor materials are included within the monitoring boundaries of the CBAM goods covered by this Monitoring Plan. Information regarding supplier, country of origin, supporting evidence and embedded emissions methodology is retained by the operator.

Commercial Precursor Name	CBAM Precursor	CN Code	Supplier	Country of Origin	Evidence	Embedded Emissions Method
Steel billet 150x150 mm	Ingots, of iron and non-alloy steel (excl. remelted scrap ingots, continuous cast products, iron of heading 7203)	72061000	Balkan Billet Supplier Ltd	Turkey	Mill Test Certificate (MTC) MTC-TR-2026-045	Default value

Additional precursor notes

- **Ingots, of iron and non-alloy steel (excl. remelted scrap ingots, continuous cast products, iron of heading 7203)** : Steel billets are purchased from an external supplier and used as the main precursor for the production of reinforcing bars. No verified actual embedded emissions report is available from the supplier; therefore default values are used for precursor embedded emissions.

9. Direct emissions

Direct emissions covered by this Monitoring Plan arise from combustion and/or process-related emission sources linked to the production of CBAM goods. The monitoring approaches, activity data sources and calculation factor methodologies applied by the operator are summarized below.

Source Stream	Emission Source	Monitoring Method	Activity Data Method	Calculation Factor Method	Estimated Annual Emissions
SS1	Reheating furnace stack	Calculation-based methodology	Metered consumption	Laboratory analysis	3250 tCO_2/year

Additional direct emission monitoring notes

- **SS1** : Direct emissions are calculated from annual natural gas consumption using activity data from the gas meter and calculation factors based on gas quality certificates and periodic laboratory verification.

10. Monitoring methodology

The monitoring methodology defines how activity data, calculation factors, precursor information, electricity data and direct emissions are collected, assessed and attributed to CBAM goods.

Methodology name	CBAM Monitoring Methodology – Steel Rolling Mill
Version	1.0
Prepared by	CBAM Coordinator
Attribution method	Production-based
Review frequency	Annually

Uncertainty assessment	Yes
Data sources	ERP, Invoices, Metering systems, Laboratory results

Methodology description

The installation applies a calculation-based monitoring methodology for direct emissions arising from natural gas combustion in the reheating furnace.

Natural gas consumption is determined using calibrated flow meters connected to the reheating furnace gas supply system. Calculation factors, including net calorific value and emission factor, are obtained from supplier gas quality certificates and periodically verified through accredited laboratory analyses.

Precursor quantities are determined using weighbridge measurements and supplier documentation. Production quantities are obtained from ERP records and production reports.

Direct emissions, precursor data and production quantities are attributed to CBAM goods using a production-based attribution methodology. Data quality is ensured through measurement device controls, supplier document verification, laboratory review and internal QA/QC procedures.

11. QA/QC and control activities

The operator applies the following QA/QC controls to ensure completeness, consistency, accuracy and reliability of CBAM monitoring data. Controls cover measurement devices, calculation factors, laboratory analyses, supplier data, ERP records, electricity data and internal review of monitoring results where applicable.

Control ID	Control Area	Control Activity	Frequency	Responsible Role	Evidence / Record
QC-01	Measurement devices	Review of natural gas flow meter readings and verification against supplier invoices.	Monthly	Energy Manager	Gas meter log and supplier invoices
QC-02	Calculation factors	Review of NCV, emission factor and oxidation factor against gas quality certificates and laboratory reports.	Annually	CBAM Coordinator	Gas quality certificates and laboratory reports

Control ID	Control Area	Control Activity	Frequency	Responsible Role	Evidence / Record
QC-03	Supplier data	Verification that steel billet supplier documentation is complete and consistent with invoices, delivery notes and mill test certificates.	Monthly	Procurement Manager	Invoice archive, delivery notes and mill test certificate register
QC-04	Internal review	Annual internal review of Monitoring Plan completeness and consistency.	Annually	CBAM Coordinator	Internal review checklist

12. Data flow activities

The data flow activities described below define how monitoring information is collected, processed, reviewed and transferred into the final CBAM calculations and reports.

DFA ID	Data Item	Data Source	Collection Method	Processing System	Responsible Role
DFA-01	Natural gas consumption	Gas flow meter and supplier invoices	Monthly meter reading and invoice review	ERP system / Excel workbook	Energy Manager
DFA-02	Calculation factors for natural gas	Supplier gas quality certificates and laboratory reports	Annual review of certificates and lab reports	Excel workbook	CBAM Coordinator
DFA-03	Precursor quantity and origin	Supplier invoices, delivery notes and MTC	Review per delivery and monthly aggregation	ERP system	Procurement Manager

DFA ID	Data Item	Data Source	Collection Method	Processing System	Responsible Role
DFA-04	Finished product quantity	Production reports and warehouse records	Monthly production reporting	ERP system	Production Manager

Additional Data Flow Information

DFA ID	Final Record	Evidence	Control Activity
DFA-01	CBAM Monitoring Plan records	Gas invoices and meter log	Monthly reconciliation between meter readings and supplier invoices.
DFA-02	Calculation factor register	Gas quality certificates and laboratory report	Annual check of NCV and emission factor consistency.
DFA-03	Precursor register	Invoices, delivery notes, MTC	Monthly reconciliation between delivered billet quantities and ERP records
DFA-04	Production quantity register	Production reports and warehouse records	Monthly comparison of production records, inventory balances and dispatch records.

13. Roles and responsibilities

Roles and responsibilities relevant to the implementation, maintenance and review of this Monitoring Plan are listed below.

Role	Department	Responsibility	Backup Role	Evidence
CBAM Coordinator	Management	Maintains the Monitoring Plan, coordinates CBAM data collection, reviews calculation factors and prepares	Energy Manager	

Role	Department	Responsibility	Backup Role	Evidence
		information required for CBAM reporting.		
Energy Manager	Utilities	Collects and validates natural gas consumption data, maintains gas meter records and supports calculation of direct emissions.	Maintenance Manager	
Procurement Manager	Procurement	Collects precursor supplier documentation, invoices, delivery notes, MTCs and country-of-origin evidence.	Accountant	
Production Manager	Production	Collects and validates production quantities and confirms product-route allocation.	CBAM Coordinator	

14. Review and update procedure

This Monitoring Plan shall be reviewed whenever significant changes occur that may affect the monitoring methodology, system boundaries, production routes, CBAM goods, precursor inputs, electricity consumption data, calculation factors, measurement systems or organizational responsibilities.

The operator shall assess the impact of any such changes on the monitoring methodology and, where necessary, update the Monitoring Plan and the associated monitoring procedures.

All revisions of the Monitoring Plan shall be documented and retained as part of the CBAM monitoring records. The current version of the Monitoring Plan shall be made available to personnel responsible for CBAM monitoring and reporting activities.