

ISO 19694-6:2023-03 (E)

Stationary source emissions - Determination of greenhouse gas emissions in energy-intensive industries - Part 6: Ferroalloys and silicon industry

Contents		Page
Foreword		v
Introduction		vi
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Abbreviated terms	3
5	Determination of GHGs -- Principles	4
5.1	Introduction	4
5.2	General	4
5.3	Determination based on mass balance	4
5.4	Use of waste gas/heat recovery	4
6	Boundaries	4
6.1	General	4
6.2	Operational boundaries	5
6.3	Organizational boundaries	5
7	Direct emissions and their determination	6
7.1	General	6
7.2	Mass balance approach	6
7.2.1	Generic approach	6
7.2.2	Sampling	7
7.2.3	Alternate approach	7
7.3	Process emissions	9
7.3.1	Overview	9
7.3.2	Methods	9
7.4	Combustion emissions	10
7.4.1	Overview	10
7.4.2	Methods	10
7.4.3	Calculation of the quantity of fuel	11
7.4.4	Determination of the lower calorific value and the emission factor	12
7.4.5	Determination of the oxidation factor	12
7.5	Combustion of biomass fuels	12
8	Indirect emissions	12
8.1	General	12
8.2	CO ₂ from external electricity production	12
8.2.1	General	12
8.2.2	GHG from heat transfer	13
9	Baselines, acquisitions and disinvestments	13
10	Reporting	13
10.1	General	13
10.2	Reporting periods	14

10.3	Performance indicators	14
10.3.1	General	14
10.3.2	Denominator for specific, unit-based emissions	15
10.3.3	Denominator for other ratio indicators	15
10.3.4	Key performance indicators	15
10.3.5	Recovery of waste gas and waste heat	15
11	Uncertainty of GHG inventories	16
11.1	Introduction to uncertainty assessment	16
11.1.1	Basic considerations	16
11.1.2	Materiality thresholds	17
11.2	Uncertainty of activity data	17
11.2.1	Measuring instruments for the determination of fuel and material quantities	17
11.2.2	Aggregated uncertainties in case of mass balances	17
11.3	Uncertainties of fuel and material parameters	18
11.4	Evaluation of the overall uncertainty of an GHG inventory	18
Annex A (normative)	Tier 1 emission factors	19
Annex B (normative)	Minimum frequency of analyses	21
Annex C (normative)	Country-wise emission factors for electricity	22
Bibliography		26