

ICS 13.020.10
CCS J31



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 32151.21-2024

**Requirements of greenhouse gas emissions accounting and
reporting - Part 21: Foundry enterprise**

温室气体排放核算与报告要求 第21部分：铸造企业

Issued on: September 29, 2024

Implemented on: April 1, 2025

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

Table of Contents

1 Scope	1
2 Normative references	1
3 Terms and Definitions	1
4 Accounting Boundary	3
5 Measurement and monitoring requirements	4
6 Calculation steps and methods	6
20 Reference	25

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting. This document is Part 21 of GB/T 32151 Greenhouse Gas Emissions Accounting and Reporting Requirements. Lower part.

1. Power generation enterprises;
2. Grid enterprises;
3. Magnesium smelting enterprises;
4. Aluminium smelting enterprises;
5. Iron and steel production enterprises;
6. Civil aviation enterprises;
7. Flat glass production enterprises;
8. Cement production enterprises;
9. Ceramic production enterprises;
10. Chemical production enterprises;
11. Coal production enterprises;
12. Textile and clothing enterprises;

1 Scope

GB/T 32151.21-2024 is the foundry part of the Chinese greenhouse gas accounting and reporting series. A foundry's emissions come from three distinct places and the standard keeps them apart: the fuel burnt in cupolas, rotary and other melting furnaces, the very large electricity draw of induction and arc melting, and the direct process emissions from the carbon that is oxidised in the charge, from the carbonate fluxes and from the binder and carbonaceous additives that burn off in the mould. China casts more metal than any other country and the sector is highly fragmented, so a common method matters more here than in a concentrated industry. The standard sets the accounting boundary of a foundry enterprise, the measurement and monitoring requirements, the calculation steps and methods for each emission source, the data quality management and the content and format of the report, with informative annexes giving the reporting template, the default parameter values and the data quality guidance. It takes effect on 1 April 2025.

This document specifies the accounting boundaries, measurement and monitoring requirements, accounting steps and methods, and data for greenhouse gas emissions of foundries. Data quality management, report content and format. This document applies to the accounting and reporting of greenhouse gas emissions from foundries.

2 Normative references

The contents of the following documents constitute essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB/T 213 Method for determination of calorific value of coal

GB/T 223.69 Determination of carbon content in steel and alloys - Gas volumetric method after combustion in a tube furnace

GB/T 223.86 Determination of total carbon content of steel and alloys - Infrared absorption method after combustion in an induction furnace

GB/T 384 Determination of calorific value of petroleum products

GB/T 3521 Chemical analysis methods for graphite

GB/T 4333.10 Determination of ferrosilicon and carbon content - Infrared absorption method

GB/T 4699.4 Determination of carbon content of ferrochromium and silicon-chromium alloys - Infrared absorption method and gravimetric method

GB/T 5611 Casting Terminology

GB/T 6422 Guidelines for energy testing of energy-consuming equipment

GB/T 7731.10 Determination of carbon content of tungsten iron - Infrared absorption method

GB/T 8704.1 Determination of vanadium, iron and carbon content - Infrared absorption method and gas volumetric method

GB/T 11062 Calculation method for calorific value, density, relative density and Wobbe index of natural gas

GB/T 15316 General technical rules for energy conservation monitoring

3 Terms and definitions

The terms and definitions defined in GB/T 5611, GB/T 32150 and the following apply to this document.

3.1 Greenhouse gas Natural and human-caused atmospheric particles that absorb and emit radiation from the Earth's surface, atmosphere, and clouds