

ICS 27.010
CCS F01



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

GB 25324-2022

Replacing GB 25324-2014

**The norm of energy consumption per unit throughput of
carbonaceous materials used for aluminium production**

铝用炭素单位产品能源消耗限额

Issued on: December 29, 2022

Implemented on: January 1, 2024

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

Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and Definitions
- 4 Energy consumption quota levels

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 replaces GB 25324-2014 "Energy Consumption Limits per Unit Product of Graphite Cathode Carbon Blocks for Aluminum Electrolysis" and GB 25325-2014 "Energy consumption limit per unit product of prebaked anodes for aluminum electrolysis". Compared with GB 25324-2014 and GB 25325-2014, except In addition to structural adjustments and editorial changes, the main technical changes are as follows:

- a) Prebaked anode for aluminum electrolysis, graphite cathode carbon block for aluminum electrolysis, graphitized cathode carbon block for aluminum electrolysis and cathode paste sheet for aluminum electrolysis The advanced value, access value and limit value of the product energy consumption quota shall be changed to the energy consumption quota level 1, 2 and 3 (see 4.1 and 4.2, Chapter 4 of GB 25325-2014 and Chapter 4 of GB 25324-2014);
- b) Change the energy consumption limit level of prebaked anodes for aluminum electrolysis (see 4.1, Chapter 4 of GB 25325-2014);
- c) Change the energy consumption limit level of graphite cathode carbon block for aluminum electrolysis (see 4.2, Chapter 4 of GB 25324-2014);
- d) Increase the energy consumption limit level of graphitized cathode carbon blocks for aluminum electrolysis (see 4.3);
- e) Increase the energy consumption limit level of cathode paste for aluminum electrolysis (see 4.4);
- f) Change the statistical scope and calculation method of energy consumption of prebaked anode products for aluminum electrolysis (see 6.1, Chapter 5 of GB 25325-2014);
- g) The statistical scope and calculation method of energy consumption of graphite cathode

carbon block products for aluminum electrolysis have been changed (see 6.2, Chapter 25324-2014 of GB 25324-2014 Chapter 5);

h) Added the statistical scope and calculation method of energy consumption of graphitized cathode carbon block products for aluminum electrolysis (see 6.3);

i) Added the statistical scope and calculation method of energy consumption of cathode paste products for aluminum electrolysis (see 6.4);

j) Changed the current standard coal conversion coefficient of commonly used energy types and major energy-consuming working fluids (see 6.5). Please note that some contents of this document may refer to patents. The issuing agency of this document assumes no responsibility for identifying patents. This document is proposed and managed by the National Standardization Management Committee. The release status of previous versions of this document and the documents it replaces are as follows:

---It was first published as GB 25324-2010 in 2010 and revised for the first time in 2014.

1 Scope

GB 25324-2022 is the Chinese national standard on the norm of energy consumption per unit throughput of carbonaceous materials used for aluminium production, in the field of energy and heat transfer engineering. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 29 December 2022 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 January 2024. Classification: ICS 27.010, CCS F01. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the energy consumption quota level, technical requirements, statistical scope and calculation method for the production of aluminum carbon per unit product. This document is applicable to the calculation of energy consumption in the production of prebaked anodes, graphite cathode carbon blocks, graphitized cathode carbon blocks and cathode paste for aluminum electrolysis and assessment, as well as the control of energy consumption in new construction, renovation and expansion projects.

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text. Among them, dated references For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

this document.

GB/T 2589 General rules for comprehensive energy consumption calculation

GB/T 12723 General rules for the preparation of energy consumption quotas per unit of product

GB 17167 General rules for equipment and management of energy measuring instruments

for energy-consuming units YS/T 65 cathode paste for aluminum electrolysis YS/T 285

Prebaked anode for aluminum electrolysis YS/T 623 Graphite cathode carbon block for

aluminum electrolysis YS/T 699 Graphitized cathode carbon block for aluminum electrolysis

3 Terms and Definitions

The terms and definitions defined in GB/T 2589 and GB/T 12723 apply to this document.

4 Energy consumption quota levels

4.1 See Table 1 for the energy consumption limit levels per unit product of prebaked anodes for aluminum electrolysis, among which level 1 has the lowest energy consumption. Table

1 Energy consumption limit level per unit product of prebaked anodes for aluminum electrolysis The unit is kilogram standard coal per ton index energy consumption quota level
Level