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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB 29995-2024

Replacing GB 29994-2013

Norm of the energy consumption per unit production of coal-based activated carbon and semi-coke

煤基活性炭和兰炭单位产品能源消耗限额

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Table of Contents

1 Scope

GB 29995-2024 is the Chinese national standard on norm of the energy consumption per unit production of coal-based activated carbon and semi-coke, 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 April 2024 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 May 2025. 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 allowance levels, technical requirements, statistical scope and calculation method for energy source consumption (hereinafter referred to as energy consumption) per unit production of coal-based activated carbon and semi-coke. This document is applicable to the calculation and assessment of energy consumption per unit production of coal-based activated carbon and semi-coke production enterprises, as well as the energy consumption control of new construction and renovation and expansion projects.

2 Normative references

The provisions of the following documents constitute the essential clauses of this document through normative references in this text. Among them, for referenced documents with dates, only the versions corresponding to the dates are applicable to this document; for

referenced documents without dates, the latest versions (including all amendments) are applicable to this document.

GB/T 2589 General rules for calculation of the comprehensive energy consumption

GB/T 7701(all parts) Granular activated carbon from coal

GB/T 12723 General principles for establishing allowance of energy consumption per unit throughput

GB/T 25211 Classification and quality requirements of semi-coke

GB/T 30201 Granular coal-based activated carbon for desulfurization and denitration

3 Terms and definitions

The terms and definitions defined in GB/T 2589, GB/T 7701 (all parts), GB/T 12723, GB/T 25211 and GB/T 30201 and the following apply to this document.

3.1 coal-based activated carbon A type of microcrystalline carbon material made from coal, which has a black appearance, a well-developed internal pore structure, a large specific surface area (500 m2/g~2500 m2/g), and a strong adsorption capacity. NOTE. According to product type, it can be divided into columnar activated carbon, agglomerated activated carbon, raw coal crushed activated carbon and activated coke.

3.2 activated coke Activated carbon adsorbent with special adsorption properties for sulfur dioxide.

3.3 semi-coke A solid carbonaceous product with low volatility, which is obtained by pyrolysis of high-volatile bituminous coal with no or weak cohesiveness under medium and low temperature conditions. [Source: GB/T 25211-2023, 3.1]

3.4 yield of semi-coke The ratio of qualified semi-coke products to input raw coal during the statistical period.

3.5 energy consumption per unit production of coal-based activated carbon The various types of energy consumed by energy-consuming units in producing coal- based activated carbon are converted into the amount of energy consumed per ton of standard product.

3.6 energy consumption per unit production of semi-coke The various types of energy consumed by energy-consuming units in producing semi- coke are converted into the amount of energy consumed per ton of semi-coke.

4 Allowance levels of energy consumption

4.1 Allowance levels of energy consumption per unit production of coal-based activated carbon The allowance levels of energy consumption per unit production of coal-based activated carbon (the raw material energy consumption is not included in energy

consumption) are shown in Table 1, where Level 1 has the lowest energy consumption. The allowance levels of energy consumption per unit production of coal-based activated carbon, with raw material energy consumption included in energy consumption, shall comply with the requirements of Appendix A.

5.1 Energy consumption per unit production of coal-based activated carbon

5.1.1 The limit value of energy consumption per unit throughput of coal-based activated carbon for existing production enterprises shall not exceed Level 3 of the allowance levels of energy consumption in Table 1.

5.1.2 The access value of energy consumption per unit throughput of coal-based activated carbon for newly built, renovated or expanded production enterprises shall not exceed Level 2 of the allowance levels of energy consumption in Table 1.

5.2 Energy consumption per unit production of semi-coke

5.2.1 The limit value of energy consumption per unit throughput of existing semi-coke production enterprises shall not exceed Level 3 of the allowance levels of energy consumption in Table 2.

6.1 Energy consumption per unit production of coal-based activated carbon

6.1.1 Energy consumption of coal-based activated carbon includes the actual consumption of various energy sources (including purchased energy-consumed medium) by the main production system, auxiliary production system, and ancillary production system, excluding energy consumed during the construction period of projects such as infrastructure construction and technological improvement, and energy exported.

6.1.2 The energy used for coal-based activated carbon raw materials (raw coal, tar, etc.) is not included in the energy consumption statistics, while the waste heat and waste energy (steam and electricity produced by waste heat boilers, etc.) recycled into the coal-based activated carbon production system shall be included in the energy consumption statistics.