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

GB/T 33018.1-2016

Replacing GB/T 33018.1-2016, GB/T 33018.2-2016, GB/T 33018.3-2016

**Energy-saving technical specification for carbon enterprise
(English Translation)**

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document supersedes GB/T 33018.1-2016 "Technical Specifications for Energy Conservation in Carbon Enterprises Part 1: Impregnation" and GB/T 33018.2-2016 "Technical Specification for Energy Conservation in Carbon Enterprises Part 2: Calcination Kilns" and GB/T 33018.3-2016 "Technical Specification for Energy Conservation in Carbon Enterprises Part 3: Calcination Kilns" Part. Machining. This document is based on GB/T 33018.1-2016, and integrates GB/T 33018.2-2016 and GB/T 33018.3-2016.

Content. Compared with documents such as GB/T 33018.1-2016, apart from structural adjustments and editorial changes, the main technical changes are as follows.

- a) The scope has been changed, adding molding and graphitization processes (see Chapter 1, Chapter 1 of the 2016 edition);
- b) The term and definition of "immersion tank" have been removed, and the term and definition of "molding process" have been added (see Chapter 3, Chapter 3 of the 2016 edition);
- c) The principle of impregnation has been removed (see Chapter 4 in the 2016 edition);
- d) Basic requirements have been added, and common technical requirements for each process have been integrated (see Chapter 4, Chapter 5 of the 2016 edition);
- e) Added energy-saving technical measures for major processes, integrating energy-saving technical requirements, energy-saving measures, energy-saving operation, and energy-saving maintenance for each process.
(See Chapter 5, Chapter 6 in the 2016 edition);
- f) The technical requirements for energy management have been revised (see Chapter 6, 6.3 of the 2016 edition);

- g) Increased testing and control requirements (see 7.2, 7.4~7.9);
- h) Safety and environmental protection requirements have been removed (see Chapter 8 of the 2016 edition);
- i) The requirements for installation, debugging, operation and maintenance have been removed (see Chapter 9 of the 2016 edition).

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Iron and Steel Association.

This document is under the jurisdiction of the National Steel Standardization Technical Committee (SAC/TC183).

1 Scope

This document specifies the basic requirements for energy-saving technologies in carbon enterprises, energy-saving technical measures for major processes, energy-saving management, testing and control.

This document applies to the molding, calcination, impregnation, graphitization, and machining processes of newly built, renovated, or expanded carbon material production enterprises.

Evaluation of energy-saving technologies in the process.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

GB/T 4272 General Technical Specifications for Thermal Insulation of Equipment and Piping
GB/T 5585.1 Busbars of copper, aluminum and their alloys for electrical use - Part 1: Copper and copper alloy busbars
GB/T 5585.2 Busbars of copper, aluminum and their alloys for electrical use - Part 2: Aluminum and aluminum alloy busbars
GB/T 8175 Guidelines for Insulation Design of Equipment and Piping
GB/T 8718 Terminology for Carbon Materials
GB/T 11062 Calculation Methods for Calorific Value, Density, Relative Density and Wobbe Index of Natural Gas
GB/T 13234 Method for Calculating Energy Savings by Energy-Using Units
GB/T 16157 Determination of particulate matter and sampling methods for gaseous pollutants in exhaust gas from stationary sources
GB/T

16618 General Technical Specifications for Thermal Insulation of Industrial Furnaces and Kilns GB 17167 General Rules for the Configuration and Management of Energy Measuring Instruments in Energy-Using Units GB/T 18494.1 Converter Transformers - Part 1: Converter Transformers for Industrial Use GB 18613 Minimum Energy Efficiency Values and Energy Efficiency Grades for Electric Motors GB 19153 Minimum Energy Efficiency Values and Energy Efficiency Grades for Positive Displacement Air Compressors GB 19761 Energy Efficiency Limits and Energy Efficiency Grades for Ventilation Fans GB 19762 Energy Efficiency Limits and Energy Efficiency Grades for Centrifugal Pumps GB.20052 Energy Efficiency Limits and Energy Efficiency Grades for Power Transformers GB 21370 Energy Consumption Limits per Unit Product of Carbon GB 24500 Energy Efficiency Limits and Energy Efficiency Grades for Industrial Boilers GB 50126 Construction Specification for Thermal Insulation Engineering of Industrial Equipment and Piping GB 50187 Standard for General Layout Design of Industrial Enterprises GB 50211 Code for Construction and Acceptance of Industrial Furnace Masonry GB 50264 Code for Design of Thermal Insulation Engineering for Industrial Equipment and Piping GB 50309 Standard for Acceptance of Quality of Industrial Furnace Masonry Engineering GB 50544 Standard for General Layout Planning and Transportation Design of Nonferrous Metals Industry GB 50765 Standard for Process Design of Carbon Plants GB 55020 General Code for Building Water Supply and Drainage and Water Conservation SY/T 0524 Technical Specification for Thermal Oil Heating Furnace System