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PEOPLE'S REPUBLIC OF CHINA**

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**Guide for the energy efficiency assessment of the blast furnace
process**

高炉工序能效评估导则

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Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and definitions
- 4 Basic principles
- 5 Evaluation steps

Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard is proposed by China Iron and Steel Association. This standard by the National Standardization Technical Committee Steel (SAC/TC183) centralized. This standard was drafted unit. Southern Metallurgical Engineering Technology Co., Ltd., Metallurgical Industry Information Standards Institute, Baoshan Iron and Steel Co., Ltd., Wuhan Iron and Steel Co., Ltd., Hunan Hualing Xiangtan Iron and Steel Co., Ltd., Iron and Steel Research Institute. The main drafters of this standard. Pan Guoyou, Li Juyan, Wang Jiangwei, Qiu Jinhui, Guilin, Raytheon, He Feng, Xiu Xiuping, Ye Lide, Fan Xiaogang, Qin Ying, Zhao Hui, Yan Chaofu, Liu Meng, Xu Hailun, Xiong Jia. Blast furnace process energy efficiency assessment guidelines

1 Scope

China's national guide to assessing the energy efficiency of the blast furnace process. It specifies the terms and definitions, the basic principles, the assessment steps, the boundaries and energy consumption accounting, the baseline and actual energy consumption, the energy efficiency indicators, the analysis and the optimisation measures. The blast furnace is where most of the energy in steelmaking is spent, and where most of the carbon dioxide is released: it reduces iron ore with coke, and the chemistry of that reduction sets a floor on how little carbon can be used. China makes more iron this way than the rest of the world combined, so a percentage point of efficiency across the national fleet is a quantity that shows up in global figures. Assessing it is harder than metering electricity. A blast furnace consumes coke, coal, oxygen, blast air and electricity, and it produces a fuel gas that is burned elsewhere on the site; whether that gas counts as an output credit or is simply outside the boundary changes the answer entirely. Fixing the boundary is what this document does before anything else.

This standard specifies the blast furnace process energy efficiency assessment terms and definitions, basic principles, assessment steps, boundaries and energy consumption

statistics, the benchmark energy Consumption, actual energy consumption, energy efficiency index, energy efficiency analysis and energy efficiency optimization measures. This standard applies to blast furnaces in steel enterprises energy efficiency assessment and energy saving potential analysis.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB 17167 energy-using units of energy measurement equipment and management of general rules

GB/T 21368 Iron and steel enterprises energy measurement equipment and management requirements

GB/T 23331 energy management system requirements

GB/T 28924 steel enterprise energy efficiency index calculation guide

3 Terms and definitions

GB/T 23331, GB/T 28924 and defined by the following terms and definitions apply to this document.

3.1 Modified baseline energy consumption modifiedbenchmarkofenergyconsumption Taking into account the actual objective situation of the assessment object, the benchmark energy consumption per unit of product after the revision of the benchmark energy consumption.

4 Basic principles

Energy efficiency evaluation of blast furnace process should follow the following basic principles.

- a) The principle of lawful compliance The object of assessment should be consistent with national laws and regulations, in line with the requirements of the steel industry policy, in line with the relevant energy-saving emission reduction Standard requirements
- b) The principle of efficient use of energy to promote the efficient use of energy and rational allocation, encourage enterprises to adopt advanced energy-saving technologies or management measures, Improve low-energy production links;
- c) highlight the key principles should focus on inspection of key energy consumption and energy-saving potential of key processes and equipment, focusing on the analysis of energy efficiency major factor;

d) The principle of scientific and reasonable should be within the conditions permit, excluding the impact of incomparable factors to ensure the comparability of assessment indicators and evaluation The rationality of price analysis.

5 Evaluation steps

Blast furnace process energy efficiency assessment should include but not limited to the following steps.

a) determine the boundaries and energy consumption statistics;