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PEOPLE'S REPUBLIC OF CHINA**

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**Guide for the energy efficiency assessment of the grate-kiln
iron ore pelletizing process**

链算机-回转窑球团工序能效评估导则

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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 by: MCC Tiantian International Engineering Co., Ltd., Metallurgical Industry Information Standards Institute, MCC Southern Engineering and Technology Ltd., Xiangtan Ruitong Pellet Co., Ltd., Jinan Iron and Steel Group International Engineering Technology Co., Ltd., Anshan Iron and Steel Group Mining Co., Ltd. The main drafters of this standard. Hu Bing, He Guoqiang, Ye Hengdi, Chu Tai mountain, Wang Zhaocai, Wang Jiang Wei, Qiu Jinhui, Sun Ying, Xu Hailun, Wang Ju Xiang, He Xinhua, Zhu Xiaochun, Li Zongping, Shao Yuanjing, He Zhen, Xie Luping, Dong Baoli, Luan Yuandi, Gao Jingjun, Shi Chunli, Gao Junchi. Chain - rotary kiln pellet process efficiency evaluation guidelines

1 Scope

China's national guide to assessing the energy efficiency of grate-kiln iron ore pelletizing. It specifies the terms and definitions, the basic principles, the assessment procedure, the boundaries and energy accounting, the baseline and actual energy consumption, the energy efficiency indicators, the analysis and the optimisation measures. Pelletizing is the alternative to sintering for preparing fine ore, and it is the better one where the ore is fine enough: the concentrate is rolled with a binder into green balls about a centimetre across, dried and preheated on a travelling grate, hardened in a rotary kiln at around 1300 degrees C, and cooled in an annular cooler. The pellets that result are stronger, more uniform and higher in iron than sinter, and they can be shipped, which sinter cannot. The energy accounting is intricate because the process is a heat cascade: the cooler's hot air feeds the kiln, the kiln's exhaust feeds the grate, and the grate's exhaust dries the green balls. How well those transfers are made is most of what determines the plant's consumption.

This standard specifies the terms and definitions, basic principles, assessment procedures, boundaries and energy systems of the chain nepheline - rotary kiln pellet process energy

efficiency assessment Meter range, baseline energy consumption, actual energy consumption, energy efficiency index, energy efficiency analysis and energy efficiency optimization measures. This standard applies to steel production enterprises chain machine - rotary kiln pellet process 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/T 15316 energy-saving monitoring techniques

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 28662 steel sintering, pellet emissions of industrial air pollutants

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

Chain machine - rotary kiln pellet process energy efficiency evaluation 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

Chain machine - rotary kiln pellet process energy efficiency assessment should include, but not limited to, the following steps.