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YS

NONFERROUS METALS INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

YS/T 124-1994

Replacing YS/T 124-1994

Methods of determination and calculation of heat balance in metallurgical furnaces for production of carbon products. Part 1: Gyration cave

(English Translation)

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Foreword

YS/T 124 "carbon products manufacturing Determination and calculation of heat balance of the furnace" is divided into five parts.

--- Part 1. rotary kiln;

--- Part 2. Tank calciner;

--- Part 3. Electrical calciner;

--- Part 4. roaster;

--- Part 5. Graphite resistance furnace.

This section YS/T 124 - Part 1.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This standard by the national non-ferrous metals Standardization Technical Committee (SAC/TC243) centralized.

This part is YS/T 124-1994 "carbon products manufacturing Determination and calculation of heat balance of the furnace" in the rotary kiln section amendments.

Compared with YS/T 124-1994, the main changes are as follows.

--- Standardized units of measurement, symbols, highlighting the standard of rigor;

--- Furnace surface temperature of more realistic test requirements.

The non-ferrous metal part by the National Standardization Technical Committee and centralized.

This part of the Aluminum Corporation of China Guizhou Branch is responsible for drafting.

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1 Scope

YS/T 124 This part provides carbon products manufacturing various types of rotary kiln heat balance determination and calculation of the reference measurement conditions, measured Given project and calculation methods.

This section applies to all types of rotary kiln heat balance measurement and calculation method of producing carbon products.

2 Thermal balance determination and calculation of the reference and measurement system

2.1
reference temperature using the ambient temperature.

2.2
reference pressure using 101325Pa.

2.3
calorific value of the fuel calorific value calculated by application based low (bits); conversion Joule card and using 1cal = 4.1868J.

2.4
rotary kiln heat balance measurement and calculation methodology, including body kiln, kiln hood, kiln hood and the settling chamber (or combustion chamber), not including the cold but machine.

3 Determination of requirements and time

3.1
Determination of thermal equilibrium in the cycle time, must be in a rotary kiln measured under normal operating conditions, the production conditions and meet the maximum Organization when measured capacity.

3.2
Determination of time specified continuous determination of 6h, the number of measurements for each item not less than three times, and then take the arithmetic mean.

4.1 Material entering the kiln

4.1.1
The use of the belt and the volume of electronic scales into the kiln at, measured cumulative amount within the specified period.

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4.1.2

Physical and Chemical Material Analysis. Determination of material into the kiln temperature, material moisture, material application based low (bits) heat and specific heat.

4.2.1 Fuel metering

Heavy oil as fuel, the measured points are located in the tank into the kiln at the meter or metering volume method; pipeline gas as fuel, the measuring point is located in the Before the kiln, with a gas flowmeter to measure the amount of fuel accumulated in a predetermined measurement period.

Physical and chemical analysis of fuel 4.2.2 the moisture content of the moisture content of the fuel or gas fuel, chemical composition, application-based fuels low (bits) heat, or under ingredient calculated an application based fuels low (bits) and the temperature of heat into the kiln, the pressure.

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