CCS D 31

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 10322.6-2022

Iron ores for blast furnace feedstocks - Determination of the decrepitation index

Issued on: April 15, 2022 **Implemented on: November 1, 2022**

Issued by: State Administration for Market Regulation, China National Standardization Administration

Table of Contents

foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1.Structure and Drafting Rules of Standardization Documents" drafted.

This document is part 6 of GB/T 10322, GB/T 10322 has issued the following parts.

--- Iron ore sampling and sample preparation methods;

--- Experimental method for assessing quality fluctuations of iron ore;

---Experimental method for checking sampling precision of iron ore;

---Experimental method for checking sampling deviation of iron ore;

--- Determination of moisture content of iron ore delivery batches;

--- Determination of thermal cracking index of iron ore for blast furnace charge;

--- sieving determination of particle size distribution of iron ore and direct reduced iron;

--- Nitrogen adsorption method for single-point determination of iron ore specific surface area.

This document replaces GB/T 10322.6-2004 "Determination method of hot cracking index of iron ore", compared with GB/T 10322.6-2004,

In addition to structural adjustments and editorial changes, the main technical changes are as follows.

a) increased the scope of application (see Chapter 1);

b) Added the requirement for cooling to room temperature after heating (see Chapter 4 and 5.1);

c) The stipulation of the 25mm sieve used for re-screening is deleted (see Chapter 6 of the.2004 edition);

d) The requirements for weighing accuracy and recording of test samples are added (see 5.2);

e) Added the requirements for equipment overview and weighing device (see 6.1 and 6.5);

f) Changed the requirements for heating furnace and test sieve (see 6.2 and 6.4, 5.1 and 5.3 of the.2004 edition);

g) The loading method of the sample has been changed (see 7.2, 7.3 of the.2004 edition);

h) Deleted the requirement of "reporting the mass percentage passing through 3.15mm and 0.05mm sieves at the same time" in the result representation (see.2004

Chapter 8 of the edition);

i) The chapter "Verification" was added (see Chapter 10).

This document is equivalent to ISO 8371.2015 "Determination of Thermal Cracking Index of Iron Ore for Blast Furnace Charges".

Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

Iron ore is the main raw material of the iron and steel industry. In the iron and steel industry standard system, the iron ore sampling, sample preparation, physical test method series

Standard is a very important part of it, and it plays an important role in ensuring the quality of iron ore products. This series of method standards serves iron ore.

It provides technical support for the high-quality development of my country's iron and steel industry.

The GB/T 10322 series of standards respectively stipulate sampling and sample preparation methods, experimental methods for evaluating quality fluctuations, and methods for checking sampling precision.

Experimental methods, experimental methods for checking sampling deviation, determination of moisture content in delivery batches, determination of thermal cracking index, sieving test for particle size distribution

A single-point measurement method for constant and specific surface area.

In.2000, GB/T 10322 issued five national standards for iron ore sampling and preparation for the first time.

According to the actual demand of production, after the formulation and revision of the standard, the current series of standards have been formed, which consists of 8 parts.

--- Iron ore sampling and sample preparation methods;

--- Experimental method for assessing quality fluctuations of iron ore;

---Experimental method for checking sampling precision of iron ore;

---Experimental method for checking sampling deviation of iron ore;

--- Determination of moisture content of iron ore delivery batches;

--- Determination of thermal cracking index of iron ore for blast furnace charge;

--- sieving determination of particle size distribution of iron ore and direct reduced iron;

--- Nitrogen adsorption method for single-point determination of iron ore specific surface area.

This document gives a relative measure of the degree of cracking of iron ore due to rapid heating of the particle size, and specifies the hot cracking index

The determination method of, after this revision, is consistent with the international standard level.

Determination of thermal cracking index of iron ore for blast furnace charge

Caution - Persons using this document should have experience in formal laboratory work. This document does not address all security issues. use

It is the responsibility of the operator to take appropriate safety and health measures and to ensure compliance with the conditions stipulated by the relevant national regulations.

1 Scope

This document provides a relative measure of the degree of cracking of iron ore due to rapid heating of the particle size and specifies the thermal cracking index

test methods.

This document applies to iron ore lumps for blast furnace charge.

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, dated citations

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

this document.

Note. GB/T 10322.1-2014 Iron ore sampling and sample preparation method (ISO 3082.2009, IDT)

ISO 3310-1 Technical requirements and inspection of test sieves - Part 1.Test sieves of woven wire mesh (Testsieves-Technical

Note. GB/T 6003.1-2012 Technical requirements and inspection of test sieves - Part 1.Wire woven mesh test sieves (ISO 3310-1.2000, MOD)

ISO 3310-2 Technical requirements and inspection of test sieves - Part 2.Metal perforated plate test sieves (Testsieves-Technical

Note. GB/T 6003.2-2012 Technical requirements and inspection of test sieves - Part 2.Metal perforated plate test sieves (ISO 3310-2.1999, MOD)

Note. GB/T 20565-2022 Terms for iron ore and direct reduced iron (ISO 11323.2010, IDT)

3 Terms and Definitions

Terms and definitions defined in ISO 11323 apply to this document.

4 Principles

The test sample was rapidly heated from room temperature to 700 ° C and maintained at this temperature for 30 min, then cooled to room temperature in air, using a 6.3 mm

The square hole test sieve was sieved, and the thermal cracking index was calculated from the mass percentage of the passing -6.3mm section.

5.1 Sampling and preparation

Sampling and sample preparation of a delivery lot shall be carried out in accordance with ISO 3082.

The particle size range of lump ore should be 20mm~25mm, and the dry basis sample mass satisfying this particle size range should be at least 5.0kg.