



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

**GB/T 20565-2022**

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**Iron ores and direct reduced iron - Vocabulary**

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### 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 replaces GB/T 20565-2006 "Terminology of Iron Ore and Direct Reduced Iron", compared with GB/T 20565-2006, except for the

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

a) Added normative references ISO 3310-1 and ISO 3310-2 (see Chapter 2);

b) Added the term "sintered pellets" and its definition (see 3.11);

c) Chapter 3 revised the definitions of the terms "iron ore", "lumps", "sinter" and "pellets" (see 3.1, 3.3, 3.9, 3.10, 2006 edition)

3.1, 3.3, 3.9, 3.10);

d) Chapter 5 added "sample preparation", "minimum mass of reduced large sample", "field sampling", "quantitative sampling", "sampling drill", "auger" and "reference".

Terms and definitions such as "method", "reference sample", "quality fluctuation", "precision", "repeatability limit", "Grubbs test" (see 5.8,

5.19, 5.25, 5.29, 5.31~5.38);

e) Chapter 5 revised the definitions of the terms "layer", "subsample", "increment sample" and "cut" (see 5.2, 5.5, 5.9, 5.10, 5.2,

5.5, 5.8, 5.9);

f) Chapter 6 adds the terms "test sieve", "dry basis", "natural basis", "constant weight", "partial drying", "average particle size", "delivery batch moisture" and other terms and

Definition (see 6.11, 6.24~6.29);

g) Chapter 6 revised the terms "specification particle size", "nominal maximum particle size", "finest particle size", "manual screening", "auxiliary manual screening", "batch size"

Definition of "sieving" and "screening endpoint" (see 6.3, 6.4, 6.8, 6.15, 6.16, 6.18, 6.23, 6.3, 6.4, 6.8, 6.14, 2006 edition, 6.15, 6.17, 6.22);

h) Chapter 7 adds terms and definitions such as "air-dried samples", "oven-dried samples", "alkalinity", "static method" and "dynamic method"

(see 7.1.7, 7.1.8, 7.2.19, 7.4.12, 7.4.13);

i) Chapter 7 revised the terms "bulk density", "apparent density", "apparent volume", "open pores", "closed pores", "mixed ore" and "priming material"

"Sintering Return", "Sintering Finished Product", "Drum Strength", "Reduction Degree", "Reduction", "Metalization Rate", "Reduction and Pulverization", "Low-Temperature Reduction and Pulverization"

Definitions of "free expansion", "load reduction", "clumping" and "clumping" (see 7.1.1~7.1.5, 7.2.1, 7.2.5, 7.2.13, 7.2.14,

7.3.1, 7.4.3~7.4.11, 7.1.1~7.1.5, 7.2.1, 7.2.5, 7.2.13, 7.2.14, 7.3.1, 7.4.3~ of the 2006 edition

7.4.11);

j) Deleted the term "wear resistance index" and its definition (see 7.3.2 of the 2006 edition);

k) Chapter 8 adds "Certified Reference Material for Iron Ore", "Laboratory Sample", "Drying Base", "Air Drying Base", "Blank Test", "Verification"

"Test", "Oxide Coefficient", "Standardization Test", "Precision Test", "Internal Reference Material" and other terms and definitions (see 8.9~

8.18);

l) Chapter 8 revised the definitions of the terms "hygroscopic water", "metallic iron" and "acid-soluble iron (II)" (see 8.1, 8.5, 8.7, 8.1, 2006 edition,

8.5, 8.7);

m) The content range of the main elements was deleted, and the "Compendium of Statistical Terms" was added (see Appendix A, Appendix A of the 2006 edition);

n) Revised Appendix B (see Appendix B, Appendix B of the 2006 edition).

This document is equivalent to ISO 11323:2010 Terminology for iron ore and direct reduced iron.

The following minimal editorial changes have been made to this document.

--- Additional information in the definition is changed to the definition's note;

---In order to facilitate the application in my country, the Chinese Pinyin index has been added.

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

## 1 Scope

This document defines the processes involved in the sampling, preparation, moisture and particle size analysis of iron ore and direct reduced iron, as well as physical testing, chemical analysis

terms and definitions, and also include some special analytical terms used in the corresponding international/national standards.

This document applies to iron ore and direct reduced iron.

## 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.

ISO 565 Test sieves, basic dimensions of woven wire mesh, perforated plates and electroformed sheet sieves (Testsieves-Metalwire)

Note. GB/T 6005-2008 Basic dimensions of test sieve wire woven mesh, perforated plate and electroformed sheet mesh (ISO 565:1990, MOD)

ISO 3310-1 Test sieves - Technical conditions and tests - Part 1. Wire woven mesh 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 6003.1-2012 Technical requirements and inspection of test sieves - Part 1. Wire woven mesh test sieves (ISO 3310-1:2000, MOD)

## 3 Natural and processed iron ore

### 3.1

#### iron ore ironore

Any natural or processed rock, mineral or ore aggregate from which iron can be produced commercially.

Note. Iron ore contains one or several main iron-bearing minerals.

- a) reddish-brown hematite, maghemite and pseudohematite;
- b) magnetite;
- c) hydrated iron oxides, including goethite, limonite and borosite;
- d) Iron carbonates, including siderite or nodularite, iron dolomite and other mixed carbonates;
- e) roasted pyrite or pyrite slag;
- f) Sometimes ferrites (eg calcium ferrite) produced in natural ores, mainly molten pellets and sintered bodies.

Also included (dry basis after heating at 105°C) manganese iron ores and concentrates with manganese content not exceeding 8%.

Excludes the use of pigments, glazes, thick suspension media and other ultra-fine iron-bearing minerals not related to the production of iron and steel.

#### 3.2

##### natural iron ore naturalironore

Mined from mines, ore that has not undergone any beneficiation process except for crushing.

Note. This ore is also referred to as drop-ship ore or raw ore.

#### 3.3

##### lump ore lumpore; ore lump

The lower limit of the specified particle size is the ore composed of coarse particles of 10mm~6.3mm.