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

中华人民共和国国家标准

GB/T 8263-2010

Replace GB/T 8263-1999

Abrasion-resistant white iron castings

抗磨白口铸铁件

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Foreword

This Standard is modified in relation to ASTM A532/A532M-93a (2008) *Standards for Abrasion-resistant Cast Iron*.

The main technical differences between this Standard and ASTM A532/A532M-93a (2008) are as follows:

- The definition of abrasion-resistant white iron castings is added;
- The indication way of grades is different;
- All grades except Class I Type C Grade Ni-Cr-GB are used, and other three grades, namely, Grade BTMCr2, Grade BTMCr8 and Grade BTMCr12-DT, are added;
- Provisions on the visual quality of the casting are added;
- Rules for sampling inspection are added;
- Requirements for marking, storage, packaging, transport are added.

This Standard will replace GB/T 8263-1999 *Abrasion-resistant White Iron Casting*

The main technical revision contents between this Standard and GB/T 8263—1999 are as follows:

- Code of the abrasion-resistant white iron casting is modified;
- BTMCr12-DT grade is added;
- The original indication way of BTMCr12 grade is modified;
- The range of chemical composition is adjusted;
- Microelements, such as V, Ti, Nb, B, RE, etc. are allowed to be added for all grades;
- Surface hardness of BTMCr12-GT and BTMCr26 with higher chromium content is improved;
- Hardness requirement for the casting at 40% depth of section is added;
- Dimensional tolerances and weight tolerances for the abrasion-resistant white iron casting is reduced;
- The heat treatment specifications are modified;
- The composition of metallurgical structure is modified;
- Usage characteristics of the abrasion-resistant white iron casting are deleted.

In this Standard, Annex A and Annex B are informative annexes.

This Standard is proposed and under the jurisdiction of National Technical Committee of Standardization for Casting (SAC/TC 54).

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The issuances of previous versions of the standard replaced by this Standard are as follows:

——GB 8263—1987, GB/T 8263—1999.

Abrasion-resistant white iron castings

1 Scope

This Standard specifies the terms, definitions, grades, technical requirements, inspection methods, inspection rules, marking, storage, packaging and transport of abrasion resistant white iron with Cr and Ni and abrasion resistant white iron with Cr.

This Standard is suitable for abrasion-resistant components used in metallurgy, building materials, electricity, construction, shipbuilding, coal, chemical and machinery industries.

2 Normative References

The articles contained in the following documents have become this standard when they are quoted herein. For the dated documents so quoted, all the modifications (excluding corrections) or revisions made thereafter shall not be applicable to this Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

GB/T 223.11 Iron steel and alloy - Determination of chromium content - Visual titration or potentiometric titration method

GB/T 223.18 Methods for chemical analysis of iron, steel and alloy The sodium thiosulfate separation iodimetric method for the determination of copper content

GB/T 223.23 Iron steel and alloy - Determination of nickel content - The dimethylglyoxime spectrophotometric method

GB/T 223.26 Iron steel and alloy - Determination of molybdenum content - The thiocyanate spectrophotometric method

GB/T 223.59 Iron steel and alloy - Determination of phosphorus content - Bismuth phosphomolybdate blue spectrophotometric method and antimony phosphomolybdate blue spectrophotometric method

GB/T 223.60 Methods for chemical analysis of iron, steel and alloy The perchloric acid dehydration gravimetric method for the determination of silicon content

GB/T 223.64 Iron steel and alloyed - Determination of manganese content - Flame atomic absorption spectrometric method

GB/T 223.67 Iron steel and alloy - Determination of sulfur content -Methylene blue spectrophotometric method

GB/T 223.69 Iron steel and alloy - Determination of carbon contents - Gas-volumetric method after combustion in the pipe furnace

GB/T 230.1 Metallic materials - Rockwell hardness test - Part 1: Test method(scales A、B、C、D、E、F、G、H、K、N、T)

GB/T 231.1 Metallic materials—Brinell hardness test—Part 1:Test method

GB/T 5611 Foundry terminology

GB/T 5612 Code for representing cast iron

GB/T 6060.1-1997 Roughness comparison specimens Cast surfaces

GB/T 6414-1999 Castings--System of dimensional tolerances and machining allowances

GB/T 11351-1989 Mass tolerances for castings

GB/T 15056 Evaluation method on cast surface roughness

GB/T 20066 Steel and iron - Sampling and preparation of samples for the determination of chemical composition

3 Terms and definitions

For the purpose of this Standard, the following terms and definitions defined in GB/T 5611 apply.

3.1

Abrasion-resistant white iron

Metallurgical structure is the white iron constituted by metal matrix and carbide and with excellent abrasion-resistant property.

3.2

Abrasion-resistant white iron with Cr and Ni

Abrasion-resistant white iron with the main alloying elements of nickel and chromium

3.3

Abrasion-resistant white iron with Cr

Abrasion-resistant white iron with the main alloying element of chromium

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