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

GB/T 5612-2025

Replacing GB/T 5612-2008

Designation of cast irons

铸铁牌号表示方法

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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 for standardization documents" Drafting is required.

This document replaces GB/T 5612-2008 "Methods for indicating cast iron grades". Compared with GB/T 5612-2008, except for structural adjustments and In addition to logical changes, the main technical changes are as follows.

- a) Added cast iron classification (see 4.1);
- b) The cast iron code description has been changed (see 4.2, 3.1 of the 2008 edition);
- c) Added the method of indicating cast iron grades (see Chapter 5, 3.2 and 3.3 of the 2008 edition).

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document is proposed and coordinated by the National Technical Committee on Foundry Standardization (SAC/TC 54).

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This document was first published in 1985, revised for the first time in 2008, and this is the second revision.

Cast iron grade indication method

1 Scope

This document gives the classification of cast irons and the designation of cast iron grades.

This document is applicable to various cast iron materials and castings.

2 Normative references

This document has no normative references.

3 Terms and definitions

There are no terms or definitions that require definition in this document.

4.1 Classification of cast iron

According to the graphite particle morphology in the metallographic structure of cast iron and the existence form of carbon in cast iron, cast iron is divided into gray cast iron, ductile cast iron, vermicular cast iron and so on.

There are five major categories. graphite cast iron, malleable cast iron and white cast iron.

4.2 Cast iron code

4.2.1 The basic code of cast iron shall be the first capital letter of the Chinese phonetic alphabet of the type of cast iron, such as grey cast iron, ductile iron, The codes for wrought iron and white cast iron are HT, QT, KT and BT respectively. When the code letters of two cast iron names are the same, the code letter is used.

Types of cast iron are composed of the first capital Latin letter of the Chinese phonetic alphabet followed by the second lowercase letter of the pinyin, such as vermicular cast iron is represented as RuT.

4.2.2 The code for cast iron with special properties can be composed of the basic code of cast iron and the first letter of the Chinese phonetic symbol used to indicate the special property.

It is composed of capital letters, such as HTM stands for wear-resistant gray cast iron, HTR stands for heat-resistant gray cast iron, and HTS stands for corrosion-resistant gray cast iron.

4.2.3 The code for cast iron produced by special process can be composed of the basic code of cast iron and the other code following it to indicate the name of the special process.

The first capital letter of the Chinese phonetic symbol of one or two Chinese characters is used, such as QTD for isothermally quenched ductile iron, HTLZ for continuous Casting grey cast iron.

4.2.4 For the codes of various types of cast iron, see 6.2.

5.1 Cast iron grades expressed in terms of mechanical properties

5.1.1 When the tensile properties are used to indicate the cast iron grade, the tensile property value is listed after the cast iron code. If there is only one group of numbers after the code, the The first group of numbers indicates the tensile strength value in MPa.

MPa, the second group of numbers indicates the elongation value in %, and the two groups of numbers are separated by "-".

5.1.2 When hardness is used to indicate cast iron grades, the hardness code and hardness value are placed after the cast iron code, with the hardness code between the cast iron code and the hardness code.