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CCS J31

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 1175-2018

Replacing GB/T 1175-1997

Casting zinc alloys

铸造锌合金

Issued on: July 13, 2018 **Implemented on: August 1, 2018**

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Foreword

This Standard was drafted in accordance with the rules given in GB/T 1.1-2009. This Standard replaces GB/T 1175-1997 "Casting zinc alloys". Compared with GB/T 1175-1997, the main technical changes are as follows: - added the normative description on technique codes (see 4.3); - modified the chemical composition and impurity element limits of alloys (see Table 1 of 5.1); - deleted Annex B of Edition 1997, added new Annex B. This Standard was proposed by and shall be under the jurisdiction of National Technical Committee on Casting of Standardization Administration of China (SAC/TC 54). Main drafting organization of this Standard. Ningbo Donghao Casting Co., Ltd. The drafting organizations of this Standard. Zhangzhou Jinnuo Industrial Co., Ltd., Huoshan County Zhongfu Electromechanical Technology Co., Ltd., Guizhou Institute of Metallurgical Chemical Industry, Dongguan Shijie Huafeng Metal Co., Ltd., Shenzhen Lingwei Technology Co., Ltd., Guizhou Academy of Sciences, Ningbo Institute of Technology. Main drafters of this Standard. Yang Wenhao, Ma Zhengsong, Xue Tao, Du Zhongfu, Wu Jian, Yang Qian'en, Gu Wenquan, Liang Huancao, Du Jun, Xu Niansheng, Dai Jiaoyan, Pan Lingling. Version of standard substituted by this Standard is. - GB/T 1175-1997. Casting zinc alloys

1 Scope

GB/T 1175-2018 is the Chinese national standard on casting zinc alloys, in the field of metallurgy. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 13 July 2018 by the State Administration for Market Regulation; Standardization Administration of China,

and has been in force since 1 August 2018. Classification: ICS 77.120.60, CCS J31. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This Standard specifies the alloy designations and codes, technical requirements, test methods and inspection rules for casting zinc alloys. This Standard is applicable to the zinc alloys for zinc alloy castings (excluding die castings).

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 228.1, Metallic materials - Tensile testing - Part

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

4 Alloy designations and codes

4.1 Alloy designations See Table 1 for casting zinc alloy designations. The representation methods for designations shall comply with the provisions of GB/T 8063.

4.2 Alloy codes See Annex A for the representation methods of alloy codes.

5 Technical requirements

5.1 Chemical composition See Table 1 for chemical composition of casting zinc alloys.

6 Test methods

6.1 Chemical composition The analysis method of alloy chemical composition is carried out according to the provisions of GB/T 12689.1, GB/T 12689.3 ~ GB/T 12689.8 and GB/T 12689.10 respectively.

7 Inspection rules

7.1 Chemical composition Take a chemical composition specimen before casting (before the furnace), and No. Alloy designation Alloy code

7.2 Mechanical properties

7.2.1 Casting specimen of mechanical properties while casting specimen of chemical composition.

7.2.2 For each furnace (batch) of alloys, send 2 specimens of its casting mechanical properties (1 before furnace, 1 after furnace) at the first time to determine mechanical properties.

7.2.3 When the single casting specimen is found to have casting defects or the inspection result is unqualified due to the failure of the inspection itself, the inspection result shall be invalid.

Annex A

(informative) Representation methods for casting zinc alloy codes A.1 Code composition The alloy code consists of the letters Z, A (they are the first letters of the chemical element symbol for zinc and aluminum) and the subsequent Arabic numerals. The first of ZA or the first, second digits represents the modified integer value of the average percentage of aluminum. The average percentage of copper is rounded off to an integer value and is placed at the end of the code. The aluminum content and copper content is separated with a horizontal line (one byte long).