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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 13818-2024

Replacing GB/T 13818-2009

Die casting zinc alloys

压铸锌合金

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Foreword

This document was drafted in accordance with the rules given in GB/T 1.1-2020 "Directives for standardization - Part

1.Rules for the structure and drafting of standardizing documents". This document replaces GB/T 13818-2009 "Die casting zinc alloys". Compared with GB/T 13818-2009, in addition to structural adjustments and editorial changes, the main technical changes in this document are as follows:

a) Change the limit requirements for some impurity elements in the chemical composition of diecasting zinc alloys (see

5.1 of this Edition;

4.1 of Edition 2009);

b) Add diecasting zinc alloy designations YZZnAl4C, YZZnAl3Cu5 and chemical composition (see

5.1 of this Edition);

c) Add surface quality requirements for diecasting zinc alloys (see

5.2 of this Edition);

d) Change the test method for chemical composition of diecasting zinc alloy (see

6.1 of this Edition; Chapter 5 of Edition 2009);

e) Add inspection rules for diecasting zinc alloys (see Chapter 7 of this Edition; Chapter 5 of Edition 2009);

f) Change the marking, quality certification, packaging, transportation and storage requirements for diecasting zinc alloys (see Chapter 8 of this Edition; Chapter 6 of Edition 2009). Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. The issuing authority shall not be held responsible for identifying any or all such patent rights. This document was proposed by and shall be under the jurisdiction of National Technical Committee on Casting of Standardization Administration of China (SAC/TC 54). The drafting organizations of this document. Guizhou Metallurgical and Chemical Industry Research Institute, Suzhou Xiangguan Alloy Research Institute Co., Ltd., Wuhu Longxing Alloy Co., Ltd., Dongguan Shijie Huafeng Metal Co., Ltd., Changsha Dicastal Technology Co., Ltd., Anhui Tongguan Nonferrous Metals (Chizhou) Co., Ltd., ACODI Fuller Precision Technology (Taicang) Co., Ltd., Foshan Vocational and Technical College, Zhejiang Bairun Kitchenware Co., Ltd., Dongfeng (Shiyan) Nonferrous Casting Co., Ltd., China Machinery Engineering Institute Group Shenyang Foundry Research Institute Co., Ltd., Shanghai Jiaotong University, Beijing Institute of Graphic Communication, Chongqing Electronic Engineering Vocational College, Yantai Vocational College, Shenyang University of Technology, Guangdong Hongtu Technology Co., Ltd., FAW Foundry Co., Ltd., Jiangshan Haiwei Technology Co., Ltd., CITIC Dicastal Co., Ltd., Yiwu Yunfei Zipper Co., Ltd., Weifeng Electronics (Guangdong) Co., Ltd., Nantong Hongjin Metal Aluminum Co., Ltd. Main drafters of this document. Xue Tao, Gu Wenquan, Chen Yinjie, Wang Zhongxun, Wang Heng, Wu Jian, Yang Xiaoyu, Liang Shiya, Yang Kang, Liang Yin, Wu Chunyan, Xiao Shanglong, Xu Lin, Qian Xiaofeng, Hu Zhongchao, Li Dongyu, Yang Zhaoling, Pan Yilei, Lü Jianpan, Liu Zhifa, Lin Yun, Yi Wei, Liu Jun, Zheng Xiaocui, Huang Hua, Jiang Yunfei, Huang Hongjun, Zhao Shizhi, Chang Yiqian. This document was first published in 1992.It was first revised in 2009.This is the second revision. Diecasting zinc alloys

1 Scope

GB/T 13818-2024 is the Chinese national standard on die 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 25 April 2024 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 25 April 2024. 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 document specifies the designations and codes, technical requirements, test methods, inspection rules and markings, quality certificates, packaging, transportation and storage of diecasting zinc alloys. This document applies to the production and inspection of diecasting zinc alloys.

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 8738-2014, Zinc alloy ingots for casting

GB/T 12689.1, The methods for chemical analysis of zinc and zinc alloys -- Part 1. -- The determination of aluminum content -- The chrome azurol S-polyethylene glycol octyl phenylether-cetylpyridine bromine spectrophotometric method and chrome azurol S spectrophotometric method

GB/T 12689.3, The methods for chemical analysis of zinc and zinc alloys -- Part 3. -- The determination of cadmium content -- The flame atomic absorption spectrometric method

GB/T 12689.4, The methods for chemical analysis of zinc and zinc alloys -- Part 4. -- The determination of copper content -- The lead diethyldithio-carbamate spectrophotometric method and the flame atomic absorption spectrometric method and the electrolytic method

GB/T 12689.5, The methods for chemical analysis of zinc alloys -- Part 5.-- The determination of iron content -- The sulfosalicylic acid spectrometric method and the flame atomic absorption spectrometric method

GB/T 12689.6, The methods for chemical analysis of zinc and zinc alloys -- Part 6. -- The determination of lead content -- The oscillopolarographic method

3 Terms and definitions

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

4 Alloy designations and codes

4.1 Expression methods for designations A diecasting zinc alloy designation is composed of the chemical symbols of zinc and the main alloying elements.

4.2 Expression methods for codes In the alloy code, "YX" ("Y" and "X" are the first letters of the Chinese pinyin for "Ya" and "Xin" respectively) indicates diecasting zinc alloy.

5 Technical requirements

5.1 Chemical composition The chemical composition of diecasting zinc alloy shall comply with the requirements in Table 1.

6.1 Chemical composition

6.2 Surface quality The surface quality of diecasting zinc alloy is inspected by visual inspection.

7 Inspection rules

7.1 Inspection items The inspection items are shown in Table 2.

7.2 Batching Each batch of diecasting zinc alloy shall consist of all products of the same designation and the same melting furnace. It may also consist of products of multiple melting furnaces of the same designation upon agreement between the supplier and the buyer.

7.3 Sampling The sampling regulations for diecasting zinc alloys are shown in Table 3.

8.1 Marking

8.2 Quality certificate Each batch of diecasting zinc alloy shall be accompanied by a quality certificate, which shall at least include.

8.3 Packaging Diecasting zinc alloys shall be bundled together. Each designation shall be bundled separately. The packaging shall be firm to ensure that it will not fall apart during transportation.

8.5 Storage

8.5.1 Diecasting zinc alloys shall be classified and stacked by designation. They shall be stacked neatly and stored in a dry, ventilated warehouse without corrosive substances. They shall not be stored together with acids, alkalis or other corrosive chemicals.