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

GB/T 25932-2025

Replacing GB/T 25932-2010

Cast superalloy - Master alloys - Equiaxed crystal

铸造高温合金 母合金 等轴晶

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents". Drafting.

This document supersedes GB/T 25932-2010 "General Technical Conditions for Casting High-Temperature Alloy Master Alloys" and GB/T 31309-2020 "Casting..." "Method for Calculating Electron Vacancy Numbers in High-Temperature Alloys". This document is based on GB/T 25932-2010 and integrates the content of GB/T 31309-2020.

Compared with GB/T 25932-2010, the main technical changes are as follows, apart from structural adjustments and editorial modifications.

- a) Added 49 grades of equiaxed crystal casting high-temperature alloy master alloys and related technical requirements (see Chapter 6);
- b) A method for calculating the number of electron vacancies in cast high-temperature alloys has been added (see Appendix A).

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Iron and Steel Association.

This document is under the jurisdiction of the National Steel Standardization Technical Committee (SAC/TC183).

This document was drafted by: Beijing Steel Research Institute of Advanced Technology Co., Ltd., Beijing Institute of Aeronautical Materials Co., Ltd., and Ansteel Technology.

Joint-stock company, Hebei Steel Research Institute Dekai Technology Co., Ltd., Metallurgical Industry Information and Standardization Research Institute, Jiangsu Longda Superalloy Aviation Materials Co., Ltd.

Jiangsu Metering Special Alloy Co., Ltd., Beijing Beiye Functional Materials Co., Ltd., Jiangsu Qina New Materials Technology Co., Ltd., and Shanxi Dongruitai New Materials Technology Co., Ltd.

The main drafters of this document are: Wu Baoping, Wang Kai, Zhang Huaxia, Zhang Chunxiao, Yan Chengming, Chen Huixia, Wang Bo, Li Zhigang, Li Huiwei, and Jin Kaifeng.

Ma Zhonggang, Chen Linjun, Li Liang, Wang Zhen, Zhao Wenqian, Yu Lianxu, Wang Lin.

The release history of this document and the document it replaces is as follows.

- First published in 2010 as GB/T 25932-2010;
- This is the first revision, incorporating the content of GB/T 31309-2020.

1 Scope

This document specifies the ordering details, manufacturing process, technical requirements, inspection rules, packaging, and marking of cast high-temperature alloy equiaxed crystal master alloys.

The quality certificate, transportation, and storage procedures describe the corresponding test methods.

This document applies to equiaxed master alloys (hereinafter referred to as master alloys) of cast high-temperature alloys for general precision castings.

2 Normative references

GB/T 223

GB/T 228.1

GB/T 228.2

GB/T 229

GB/T 230.1

GB/T 2039

GB/T 11261

GB/T 20123

GB/T 20127

GB/T 34209

GB/T 38939

GB/T 45447

3 Terms and Definitions

This document does not contain any terms or definitions that need to be defined.

4 Order details

Contracts or orders placed in accordance with this document should include the following.

- a) This document number;
- b) Product Name;
- c) Alloy grade;
- d) Raw material acceptance standards or technical agreements.

5.1.1 Raw materials

5.1.1.1 The use of raw materials shall comply with the provisions of HB/Z131.

5.1.1.2 The use of recycled or reclaimed high-temperature alloy raw materials is permitted. Reclaimed high-temperature alloy raw materials shall comply with the requirements of GB/T 45447.

The specific proportion and method of use of raw materials or recycled high-temperature alloy raw materials shall be determined by the purchaser based on the technical requirements of the parts and shall be specified in the contract.

5.1.2 Smelting Method

The master alloy should be melted using vacuum induction melting, and the melting process should comply with the specifications in the dedicated process technology documents. If the buyer has special requirements, they can be provided by [the relevant authority/company].

The agreement is determined through negotiation between the supply and demand parties.

5.2 Delivery Status

The master alloy is delivered in the as-cast state.

6.1 Grade and Chemical Composition

The alloy grade and chemical composition shall conform to the provisions of Table 1. If the buyer has special requirements, they shall be specified in the contract.

6.2 Mechanical Properties

6.2.1 Cast test bars according to the specific process technical documents. If otherwise specified, test bars of other forms may be cast.

6.2.2 The mechanical properties of the test bar shall conform to the provisions of Table 2 and Table 3.

6.3 Number of electron vacancies