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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 9967-2025

Replacing GB/T 9967-2010

Neodymium metal

金属钕

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1 Scope

This document specifies the classification, technical requirements, test methods, inspection rules, marking, packaging, transportation and storage of neodymium metal, as well as accompanying documentation.

This document is applicable to neodymium metal produced from neodymium oxide via molten salt electrolysis.

2 Normative references

GB/T 8170

GB/T 12690

GB/T 14635

GB/T 17803

GB/T 18115.4

GB 39176

3 Terms and definitions

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

4 Classification

The products are classified into five grades according to their chemical composition.

Nd-3N, Nd-2N5A, Nd-2N5B, Nd-2NA, and Nd-2NB. The product grade designation method shall comply with the provisions of GB/T 17803.

5.1 Chemical composition

The chemical composition of neodymium metal shall conform to the specifications in Table 1.If the buyer has special requirements for the product, the supplier and buyer may agree on a separate agreement.

5.2 Appearance quality

The product surface shall be clean, free of obvious inclusions and oxidized powder.

6.1 Chemical composition

6.1.1 The analysis method for total rare earth content (RE) in the product shall be carried out in accordance with GB/T 14635.When the total rare earth content is found to be above 99.5%, the actual value of the total rare earth content shall be calculated by the subtraction method, i.e., "100% - sumnon-rare earth impurity mass fraction".

6.1.2 The analytical method for the content of rare earth impurities in the product shall be in accordance with the provisions of GB/T 18115.4.

6.1.3 The analytical method for the content of non-rare earth impurities in the product shall be in accordance with the provisions of GB/T 12690 (all parts).

6.2 Appearance quality

Visual inspection under natural diffused light.

7.1 Inspection and Acceptance

7.1.1 The products shall be inspected by the supplier or a third party, and the product quality shall comply with the provisions of this document and the purchase order.

7.1.2 The buyer shall inspect the received products in accordance with the provisions

of this document. If the inspection results do not conform to the provisions of this document, the buyer shall raise the issue with the supplier within two months from the date of receipt of the products, and the two parties shall resolve the matter through negotiation. If arbitration is required, it may be entrusted to an organization recognized by both parties, and samples shall be taken jointly by the buyer and the supplier on the buyer's site.

7.2 Batching

Products shall be submitted for acceptance in batches; each batch shall consist of products of the same grade, and the weight of each batch shall not exceed 1000 kg.

7.3 Inspection items

Each batch of products shall undergo chemical composition and appearance quality inspection. If the buyer has requirements for the F content, the F content of the products shall also be inspected.

7.4.1 Number of samples for chemical composition analysis and appearance

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