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Lanthanum-Cerium Metal

镧铈金属

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Lanthanum-Cerium Metal

1 Scope

This Document specifies the classification and designation, technical requirements, test methods, inspection rules, marking, packaging, transportation, storage and accompanying documents of lanthanum-cerium metal.

This Document is applicable to lanthanum-cerium metals produced by molten salt electrolysis or fusion method for the production of hydrogen storage alloys, steel and non-ferrous metal alloys, etc.

2 Normative References

The provisions in following documents become the essential provisions of this Document through reference in this Document. For the dated documents, only the versions with the dates indicated are applicable to this Document; for the undated documents, only the latest version (including all the amendments) is applicable to this Document.

GB/T 8170 (all parts) Rules of rounding off for numerical values & expression and judgement of limiting values

GB/T 12690 (all parts) Chemical analysis methods for non-rare earth impurities of rare earth metals and their oxides

GB/T 14635 Rare earth metals and their compounds - Determination of total rare earth content

GB/T 17803 Designation system for rare earth products

GB 39176 Rare earth products packing, marking, transport and storage

GB/T 40795.1 Chemical analysis method of lanthanum-cerium metals and their compounds -Part 1: Determination of cerium content - Ammonium ferrous sulfate titration method

GB/T 40795.2 Chemical analysis methods of lanthanum-cerium metals and their compounds -Part 2: Determination of rare earth content

3 Terms and Definitions

For the purposes of this Document, there are no terms and definitions apply.

4 Classification and Designation

4.1 Classification

The product can be divided into the following 9 designations according to their chemical compositions, such as LaCe-61CeA, LaCe-61CeB, LaCe-61CeC, LaCe-65CeA, LaCe-65CeB, LaCe-65CeC, LaCe-69CeA, LaCe-69CeB and LaCe-69CeC.

4.2 Expression method of product designation

The expression methods of the designations of rare earth products shall comply with the provisions of GB/T17803.

5 Technical Requirements

5.1 Chemical composition

The chemical composition of the product shall comply with the provisions of Table 1. When the content of cerium (Ce) in the product is the overlapping value of the boundaries of two adjacent designations, it belongs to the designation with high cerium (Ce) content. If the purchaser has special requirements for the product, the supplier and purchaser can negotiate separately.

7.4.2 Sampling method for chemical composition analysis: when sampling, firstly polish the sample, use a drill bit with a diameter of 5 mm ~ 10 mm to drill more than 3 points at equal distances from the upper and lower sides of the alloy ingot; and discard the drill chips about 0.5 mm ~ 1.0mm from the surface of the ingot. And then drill the sample; the sampling volume of each point is no less than 10g; quickly mix the obtained sample to reduce to the required quantity; and immediately seal and store; the oxidation of the sample shall be prevented during the sampling process.

7.5 Judgment of test results

7.5.1 If the chemical composition analysis results are inconsistent with the provisions of this Document, take double samples from this batch of products to re-inspect the unqualified items. If there are still any unqualified results, the batch of products shall be judged as unqualified.

7.5.2 If the results of the appearance quality inspection do not conform to the provisions of this Document, the batch of products shall be directly judged as unqualified.

8 Marking, Packaging, Transportation, Storage and Accompanying Documents

8.1 Marking, packaging, transportation, storage

It shall meet the requirements of GB 39176.

8.2 Accompanying documents

Each batch of products shall be accompanied by accompanying documents, which shall include:

a) Quality certificate, the content is as follows:

- Supplier name;
- Product name and designation;
- Net weight and number of pieces;
- The number of this Document;
- Exit-factory date;
- Various analysis and inspection results and the seal of the supplier's quality inspection department.

b) Product certificate, the content is as follows:

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