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**Copper-beryllium Alloy Forgings and Extrusions -
General Specification**

铜铍合金锻件和挤压件 通用技术条件

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China.**

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Copper-beryllium Alloy Forgings and Extrusions - General Specification

1 Scope

This Standard specifies the requirements, order information, materials and manufacturing, chemical composition, state, grain size, physical properties, mechanical properties, heat treatment, dimensions and allowable deviation, process, final processing, appearance and test method of copper-beryllium alloy forgings and extrusions.

This Standard applies to copper-beryllium alloy forgings and extrusions whose alloy grades are C17000 (Be content of 1.7%) and C17200 (Be content of 1.9%). The alloys, which are not indicated with the grade, in this Standard, are C17200 copper-beryllium alloys.

2 Normative references

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

GB/T 6394, Determination of estimating the average grain size of metal

GB/T 8541, Terminology of forging and stamping

ASTM E 8, Test methods for tension testing of metallic materials

ASTM E 18, Test methods for Rockwell hardness of metallic materials

ASTM B 194, Specification for Copper-beryllium Alloy Plate, Sheet, Strip and Rolled Bar

ASTM B 249/B249M, Specification for General Requirements for Wrought Copper and Copper-alloy Rod, Bar, Shapes and Forgings

ASTM B 601, Classification for Temper Designations for Copper and Copper Alloys - Wrought and Cast

ASTM B 846, Terminology for Copper and Copper Alloys

requirements are supplements to the relevant provisions of ASTM B 249/B249M.

5 Order Information

5.1 Product order information includes:

- a) name and version number of this Standard;
- b) quantity: number of pieces or quality;
- c) alloy number (see Chapter 1);
- d) state (see Chapter 8) or heat treatment (see Chapter 12);
- e) if necessary, the provided forging drawings shall contain shapes, dimensions and allowances;
- f) the extrusion shall be provided with length (or mass) and straightness.

5.2 when it is required, the forging drawings or purchase order shall be provided with the following information:

- a) tensile test (see Chapter 11);
- b) special tests, such as grain size;
- c) post processing (see Chapter 15);
- d) grain size (see Chapter 9).

6 Materials and manufacturing

6.1 Materials

6.1.1 The materials which are used for the manufacture of forgings shall be ingots or forgings of C17000 or C17200, of which, the purity and compactness shall be in accordance with the provisions of the products in this Standard.

6.1.2 The quality certificate and test report shall be provided with the smelting furnace number.

6.2 Manufacturing

The hot working and heat treatment processes which are used in the manufacture of the product shall be able to make the products meet the requirements of this Standard.

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