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

GB/T 2059-2017

Replacing GB/T 2059-2008

Copper and copper alloy strip

铜及铜合金带材

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Foreword

This Standard is drafted in accordance with the rules given in GB/T 1.1-2009.

This Standard replaces GB/T 2059-2008 "Sheet of copper and copper strip". Compared with GB/T 2059-2008, the main changes in this Standard are as follows:

- ADD the code name of copper and copper alloys;
 - MODIFY the designation and state of alloys;
 - ADD 3 designations, i.e. H66, BZn18-18 and BZn18-26, and the corresponding requirements;
 - ADD H08 state to designation QSn8-0.3;
 - MODIFY the thickness and width range of some strips;
 - MODIFY the mechanical property of some strips;
 - DELETE the provisions of Rockwell hardness (HRB);
- dimension of strips is in accordance with the provisions of GB/T 26303.3";
- ADD the reference to YS/T 482 "Methods for analysis of copper and copper alloys
 - MODIFY the tensile test sample number according to the provisions of GB/T
 - ADD the provision of "The sampling method shall comply with the provisions of YS/T 668; the sample for mechanical properties and process performance shall be prepared according to the provisions of YS/T 815";
 - ADD the provisions of the sampling direction of strips for bend test.

This Standard is proposed by China Nonferrous Metals Industry Association.

The Standard is under the jurisdiction of National Technical Committee on Nonferrous Metals of Standardization Administration of China (SAC/TC 243).

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The historical version of the standard replaced by this Standard is as follows:

1 Scope

This Standard specifies the requirements, test methods, inspection rules and marking, packaging, transportation, storage, quality certificates and order (or contract) contents of

copper and copper alloy strips.

This Standard applies to wrought copper and copper alloy strips for general purpose (hereinafter referred to as strips).

2 Normative references

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

YS/T 478 The method for electrical conductivity measurement of copper and copper alloys by use of eddy current YS/T 482 Methods for analysis of copper and copper alloys - The atomic emission spectrometry YS/T 483 Methods for analysis of copper and copper alloys - X-Ray fluorescence spectrometric (wavelength dispersive) YS/T 668 The sampling method of physical and chemical testing for copper and copper alloys YS/T 815 Preparation method of test pieces for mechanical and technological properties of copper and copper alloys

3 Requirements

3.1 Product classification

3.1.1 Designation, state and specification

The designation, state and specification of strips shall comply with the provisions of Table 1. B - Oxygen-free copper, Pure copper, Phosphorus deoxidized copper;

3.1.2 Marking example

The product marking is expressed in the sequence of product name, standard number, designation (or code name), state and specification. The marking example is as follows:

accuracy of ordinary grade, thickness of 0.8 mm and width of 200 mm is marked as:

accuracy of high grade, thickness of 0.8 mm and width of 200 mm is marked as:

3.2 Chemical composition

The chemical composition of strips shall comply with the corresponding provisions in GB/T 5231.

3.3 Dimension and its allowable deviation

The dimension and its allowable deviation of strips shall comply with the corresponding provisions in GB/T 17793. The dimension and its allowable deviation exceeding the range of GB/T 17793 shall be determined by negotiation between the supply and demand parties.

3.4 Mechanical properties

The mechanical properties of strips at room temperature shall comply with the provisions of Table 2.

3.5 Bend test

The strips of designation and state listed in Table 3 can be subjected to the bend test. The bend test conditions shall comply with the provisions in Table 3. After the test, the curved surface shall not have visible cracks.

A - 0 times the strip thickness;

B - 0.5 times the strip thickness;

C - 1 times the strip thickness;

D - 1.5 times the strip thickness;

E - 2 times the strip thickness.

3.6 Electrical properties

3.7 Grain size

The strips of designation listed in Table 5 in the soft annealed (O60) state can be subjected to the grain size inspection, and the grain size shall comply with the provisions of Table 5.

a refers to the minimum grain after complete recrystallization.

A - Nominal mean diameter of grains/mm.

3.8 Surface quality

3.8.2 It is allowed for the surface of strips to have minor, localized defects such as scratches, spots, pits, indentations, roll marks, wrinkles, etc.

4 Test method

4.1 Chemical composition

The analysis method for the chemical composition of strips shall comply with the provisions of GB/T 5121 (all parts) or YS/T 482 or YS/T 483. The arbitration analysis method for the chemical composition shall comply with the provisions of GB/T 5121 (all parts).

4.2 Dimension and its allowable deviation

The test method for the dimension and its allowable deviation of strips shall comply with the provisions of GB/T 2630.3. The thickness of strips shall be measured at a distance of ≥ 5 mm from the edge when the width of strips is > 100 mm; and measured at a distance of ≥ 3