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Contents

Page

Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by Japan Copper and Brass Association (JCBA)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause l of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS H 3100**:2006 is replaced with this Standard.

However, **JIS H 3100**:2006 may be applied in the **JIS** mark certification based on the relevant provisions of Article 19 Clause 1, etc. of the Industrial Standardization Law until October 21, 2013.

Attention is drawn to the possibility that some parts of this Standard may conflict with a patent right, application for a patent after opening to the public or utility model right. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public or the utility model right.

Copper and copper alloy sheets, plates and strips

1 Scope

This Japanese Industrial Standard specifies the rolled copper and copper alloy sheets and plates (hereafter referred to as "plates") and strips (hereafter referred to as "strips") (excluding the copper and copper alloy plates and strips specified in **JIS H 3110**, **JIS H 3130** and **JIS H 3510**).

NOTE : Circular plates which are machined, punched or sheared from plates and strips are included.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS H 0321 *General rules for inspection of non-ferrous metal materials*

JIS H 0500 *Glossary of terms used in wrought copper and copper alloys*

JIS H 0501 *Methods for estimating average grain size of wrought copper and copper alloys*

JIS H 0505 *Measuring methods for electrical resistivity and conductivity of non-ferrous materials*

JIS H 1051 *Methods for determination of copper in copper and copper alloys*

JIS H 1052 *Methods for determination of tin in copper and copper alloys*

JIS H 1053 *Methods for determination of lead in copper and copper alloys*

JIS H 1054 *Methods for determination of iron in copper and copper alloys*

JIS H 1055 *Methods for determination of manganese in copper and copper alloys*

JIS H 1056 *Methods for determination of nickel in copper and copper alloys*

JIS H 1057 *Methods for determination of aluminium in copper and copper alloys*

JIS H 1058 *Methods for determination of phosphorus in copper and copper alloys*

JIS H 1062 *Methods for determination of zinc in copper and copper alloys*

JIS H 1074 *Copper and copper alloys—Determination of zirconium content*

JIS H 1292 *Methods for X-ray fluorescence spectrometric analysis of copper alloys*

JIS Z 2241 *Metallic materials—Tensile testing—Method of test at room temperature*

JIS Z 2244 *Vickers hardness test—Test method*

JIS Z 2248 *Metallic materials—Bend test*

3 Terms and definitions

For the purpose of this Standard, the terms and definitions given in **JIS H 0500** apply.

4 Grade, class and designation

The grade, class and designation of plates and strips shall be in accordance with table 1. A product designation shall consist of the designation symbol given in table 1 and the symbol of temper grade suffixed to it.

Table 1 Class, grade and designation

Grade		Class	Designation	Informative	
Alloy No.	Shape			Name	Characteristics and application examples
C 1020	Plate	Common	C 1020 P [a)]	Oxygen free copper	Excellent electric conductivity, heat conductivity, workability and drawability. Good weldability, corrosion resistance and weathering resistance. Free from hydrogen embrittlement when heated at elevated temperature in reducing atmosphere. Applicable to electrical use, chemical industries, etc.
		Special	C 1020 PS [a)]		
	Strip	Common	C 1020 R [a)]		
		Special	C 1020 RS [a)]		
C 1100	Plate	Common	C 1100 P [a)]	Tough-pitch copper	Excellent electric conductivity, heat conductivity and good workability, drawability, corrosion resistance and weathering resistance. Applicable to electrical use, distillers, buildings, chemical industries, gaskets, appliances, etc.
		Special	C 1100 PS [a)]		
	Strip	Common	C 1100 R [a)]		
		Special	C 1100 RS [a)]		
C 1201	Plate	Common	C 1201 P	Phosphorus deoxidized copper	Good workability, drawability, weldability, corrosion resistance, weathering resistance and heat conductivity. C 1220 is free from hydrogen embrittlement when heated at elevated temperature in reducing atmosphere. C 1201 has better electric conductivity than C 1220. Applicable to bath boilers, water heaters, gaskets, buildings, chemical industries, etc.
		Special	C 1201 PS		
	Strip	Common	C 1201 R		
		Special	C 1201 RS		
C 1220	Plate	Common	C 1220 P		
		Special	C 1220 PS		
	Strip	Common	C 1220 R		
		Special	C 1220 RS		
C 1441	Plate	Special	C 1441 PS [a)]	Tin-containing copper	Excellent electric conductivity, heat conductivity, thermal resistance and workability. Applicable to lead frames for semi-conductors, wiring appliances or other electric and electronic parts, water heaters, etc.
	Strip	Special	C 1441 RS [a)]		
C 1510	Plate	Special	C 1510 PS [a)]	Zirconium-containing copper	Excellent electric conductivity, heat conductivity, thermal resistance and workability. Applicable to lead frames for semi-conductors, etc.
	Strip	Special	C 1510 RS [a)]		
C 1921	Plate	Special	C 1921 PS [a)]	Iron-containing copper	Excellent electric conductivity, heat conductivity, strength, and thermal resistance, and good workability. Applicable to lead frames for semi-conductors, electric parts such as terminals and connectors, etc.
	Strip	Special	C 1921 RS [a)]		
C 1940	Plate	Special	C 1940 PS [a)]		
	Strip	Special	C 1940 RS [a)]		