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

中华人民共和国国家标准

GB/T 5231-2012

Replace GB/T 5231-2001

**Designation and chemical composition of
wrought copper and copper alloys**

加工铜及铜合金牌号和化学成分

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China

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Foreword

This standard is prepared according to the rules specified in GB/T 1.1-2009.

This standard replaces GB/T 5231-2001 *Wrought copper and copper alloys chemical composition limits and forms of wrought products*, partial designation in this standard is equivalent to designation and chemical composition of USA copper and copper alloys, for partial designation and chemical composition in previous standard, new stipulations have been made, 111 designations in GB/T 5231-2001 have been reserved, newly added 102 designations, including 213 designations. Comparison with GB/T 5231-2001, main changes of this standard are as follows:

- Adjusted for oxygen content of oxygen-free copper, changed TU0 as TU00, equivalent to USA designation C10100; newly added TU0 designation, oxygen content is 0.001%, TU1, TU2 in previous standard not changed, the oxygen content is 0.002% and 0.003%, respectively; newly added oxygen-free copper TU3, equivalent to USA designation C10200;
- Listed the QTe0.5, QZr0.2, QZr0.4 as pure-copper series, changed the expressive methods of designation as TTe0.5, TZr0.2, TZr0.4;
- Listed the QCd1, QBe0.3-1.5, QBe0.6-2.5, QBe0.4-1.8, QBe1.7, QBe1.9, QBe1.9-0.1, QBe2, QCr0.5, QCr0.5-0.2-0.1, QCr0.6-0.4-0.05, QCr1, QMg0.8, QFe2.5 in previous standard as high-copper series, changed the expressive methods of designation as TCd1, TBe0.3-1.5, TBe0.6-2.5, TBe0.4-1.8, TBe1.7, TBe1.9, TBe1.9-0.1, TBe2, TCr0.5, TCr0.5-0.2-0.1, TCr0.6-0.4-0.05, TCr1, TMg0.8, TFe2.5;
- Adjusted designation H96 in previous national standard which equivalent to ASTM alloy designation C21000, adjusted copper content from 95.0%~97.0% to 94.0%~96.0%, changed the designation as H95;
- Newly added pure copper 19 designations: TU0, TU3, TU00Ag0.06, TUA0.03, TUA0.05, TUA0.1, TUA0.2, TUA0.3, TUZr0.15, TUA0.1-0.01, TAg0.15, TP3, TP4, TTe0.3, TTe0.5-0.008, TTe0.5-0.02, TS0.4, TZr0.15, TUA0.12;
- Newly added high copper 19 designations: TBe1.9-0.4, TNi2.4-0.6-0.5, TCr0.3-0.3, TCr0.5-0.1, TCr0.7, TCr0.8, TCr1-0.15, TCr1-0.18, TMg0.2, TMg0.4, TMg0.5, TPb1,

Designation and chemical composition of wrought copper and copper alloys

1 Scope

This standard specifies designation and chemical composition of wrought copper and copper alloy.

This standard is applicable to wrought product of copper and copper alloy produced by the wrought method with pressure and ingot casting and blank adopted for copper and copper alloy.

2 Chemical Composition

2.1 Designation and chemical composition of wrought copper and copper alloy shall meet those specified in Tables 1~5.

2.2 Content of alloy elements in Table 1~Table 5 has upper and lower limits and if the content is single value, minimum limit is for copper and maximum limit is for impurity element.

2.3 Impurity sum in Table 2~Table 5 is the sum of all impurity elements except the principal composition and mainly includes Ag, As, Bi, Cd, Co, Cr, Fe, Mn, Ni, O, P, Pb, S, Sb, Se, Si, Sn, Te and Zn.

2.4 The limit value of elements not specified in Table 1~Table 5 may be determined through the negotiation of the Supplier and Purchaser. Where copper or zinc is the element of allowance, the difference between all analyzed elements and 100% may be taken.

2.5 The copper and copper alloy in this standard equivalent to ASTM standard, the code equal to ASTM designation. The designations table list equivalent to USA standard see Annex A.

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