

Title (en)
COPPER ALLOY MATERIAL

Title (de)
KUPFERLEGIERUNGSWERKSTOFF

Title (fr)
MATÉRIAU D'ALLIAGE DE CUIVRE

Publication
EP 2180071 A1 20100428 (EN)

Application
EP 07791507 A 20070727

Priority
JP 2007064813 W 20070727

Abstract (en)
A copper alloy material consisting of, by mass% Ti: 0.01-2.5%, Cr: 0.01-0.5%, Fe: 0.01% or more and less than 1%, and the balance Cu and impurities, in which the relationship between the total number N and the diameter X (m) of precipitates and inclusions having a diameter of 1 m or more satisfies the following formula (1); the relationship between tensile strength TS (MPa) and electrical conductivity, IACS (%) satisfies the following formula (2); when the copper alloy material is sheet possessing a tensile strength of 600 MPa or less, the bending workability in the bad way B 90 of the copper alloy material satisfies the following formula (3); when the copper alloy material is sheet possessing a tensile strength of 600 MPa or more, the relationship between TS (MPa) and B 90 satisfies the following formula (4); and when the copper alloy material is other than a sheet, the relationship between elongation El (%) and TS (MPa) satisfies the following formula (5). The copper alloy may include other elements such as Ag and possesses excellent strength, electrical conductivity and workability without containing any environmentally harmful elements. $\log N \# \square 0.4742 + 17.629 \times \exp - 0.1133 \times X$ TS $\# \square 648.06 + 985.48 \times \exp - 0.0513 \times \text{IACS}$ B 90 $\# \square 2.0$ B 90 $\# \square 25.093 - 54.82 \times \exp - \text{TS} + 583.61 / 1254$ 2 + 1.25 $\times t$ El $\# \square 24.138 - 24.6076 \times \exp - \text{TS} - 1816.36 / 2213.52$ 2

IPC 8 full level
C22C 9/00 (2006.01); **C22F 1/00** (2006.01); **C22F 1/08** (2006.01)

CPC (source: EP US)
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Citation (search report)
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DOCDB simple family (publication)
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