

Title (en)  
Copper alloy sheet

Title (de)  
Kupferlegierungsblech

Title (fr)  
Feuille d'alliage de cuivre

Publication  
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Application  
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Abstract (en)

[origin: EP2184371A1] The present invention relates to a Cu-Ni-Sn-P-based copper alloy sheet having a specific composition, where (1) the copper alloy sheet is set to have an electrical conductivity of 32% IACS or more, a stress relaxation ratio in the direction parallel to the rolling direction of 15% or less, a 0.2%-proof stress of 500 MPa or more and an elongation of 10% or more; (2) the X-ray diffraction intensity ratio  $I(200)/I(220)$  in the sheet surface is set to be a given value or less and at the same time, anisotropy in the stress relaxation resistance characteristic is reduced by fining the grain size; (3) the texture of the copper alloy sheet is set to a texture such that the distribution density of B orientation and the sum of distribution densities of B orientation, S orientation and Cu orientation each is set to fall in a specific range and bendability is thereby enhanced; or (4) the dislocation density measured using the value obtained by dividing the half-value breadth of the X-ray diffraction intensity peak from {200} plane in the copper alloy sheet surface by the peak height is set to a given value or more and press punchability is thereby enhanced. The Cu-Ni-Sn-P-based copper alloy sheet of the present invention is excellent in the properties required for a terminal or connector and further (1) has excellent strength-ductility balance, (2) satisfies the stress relaxation resistance characteristic in the direction orthogonal to the rolling direction, (3) has excellent bendability, or (4) has excellent press punchability.

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Citation (search report)

- [X] WO 2006132317 A1 20061214 - KOBE STEEL LTD [JP], et al
- [X] EP 1801249 A1 20070627 - KOBE STEEL LTD [JP]
- [X] EP 1612285 A1 20060104 - DOWA MINING CO [JP]
- [X] JP 2006342389 A 20061221 - KOBE STEEL LTD
- [X] JP 2001262297 A 20010926 - SUMITOMO METAL MINING CO, et al
- [X] JP 2000256814 A 20000919 - SUMITOMO METAL MINING CO
- [X] JP 2001262255 A 20010926 - SUMITOMO METAL MINING CO, et al
- [XD] JP 2006213999 A 20060817 - KOBE STEEL LTD
- [A] US 2002108685 A1 20020815 - HATAKEYAMA KOICHI [JP], et al
- [A] EP 0859065 A1 19980819 - DOWA MINING CO [JP], et al
- [A] US 2005092404 A1 20050505 - ARUGA YASUHIRO [JP], et al
- [A] JP H11343527 A 19991214 - KOBE STEEL LTD

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