

Title (en)

METHOD FOR PRODUCING A COPPER ALLOY HAVING A HIGH DAMPING CAPACITY AND ITS USE

Title (de)

VERFAHREN ZUR HERSTELLUNG EINER KUPFERLEGIERUNG MIT HOHER DÄMPFUNGSKAPAZITÄT UND DEREN VERWENDUNG

Title (fr)

PROCEDE DE FABRICATION D'UN ALLIAGE DE CUIVRE A GRANDE CAPACITE D'AMORTISSEMENT ET SON UTILISATION

Publication

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Application

EP 06775757 A 20060727

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Abstract (en)

[origin: WO2007012320A2] The invention relates to a copper alloy which is used for mechanically charged components which, during operation, are offset by vibrations and/or impacts or produce the same, and have particularly good mechanical damping. The composition of said copper alloy depends upon the use or working temperature of the component. Said copper alloy consists of 2 - 12 wt.-% manganese, 5 - 14 wt.-% aluminium and individually or in total 0 - 18 wt.-% of one or several elements, iron, cobalt, zinc, silicon, vanadium, niobium, molybdenum, chromium, tungsten, beryllium, lithium, yttrium, cerium, scandium, calcium, titanium, phosphorous, zirconium, boron, nitrogen, carbon, whereby each element does not contain more than 6 % and 100wt.-% copper. The alloy is obtained by adapting the martensite-austenitic conversion temperatures or the associated intervals M_{S} - M_{F} and/or A_{S} A_{F} to a predetermined use or working temperature of the component by varying the weight proportion of the above-mentioned alloy component during melting thereof. The damping can reach above 70 %.

IPC 8 full level

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