

Title (en)
LEAD-FREE CU-ZN ALLOY

Title (de)
BLEIFREIE CU-ZN-LEGIERUNG

Title (fr)
ALLIAGE CU-ZN SANS PLOMB

Publication
EP 3992320 A1 20220504 (DE)

Application
EP 20204628 A 20201029

Priority
EP 20204628 A 20201029

Abstract (en)
[origin: CN114427051A] The present application relates to a lead-free Cu-Zn-based alloy with improved machinability in relation to a CuZn42 alloy, consisting (data in% by weight) of Cu: 57-59.3% Fe: 0.12-0.17% (first alternative) or Fe: up to 0.06% and Mn: 0.3-0.7% (second alternative), P: 0.03-0.1% Sn: up to 1.0% Pb: up to 0.1%, the remainder being Zn plus unavoidable impurities, allowing for 0.05% per element, wherein the sum of the inevitable impurities does not exceed 0.15% by weight, wherein the following elements are allowed up to the specified content: Ni: up to 0.03%, Al: up to 0.05%, Si: up to 0.01%, -Cr: up to 0.01%.

Abstract (de)
Beschrieben ist eine bleifreie Cu-Zn-Legierung mit gegenüber der Legierung CuZn42 verbesserten Zerspanungseigenschaften, bestehend aus (Angaben in Gew.-%):- Cu: 57 - 59,5 %, - Fe: 0,12 - 0,17 % (1. Alternative) oder Fe: max. 0,06 % und Mn: 0,3 - 0,7 % (2. Alternative), - P: 0,03 - 0,1 %, - Sn: max. 1,0 %, - Rest Zn nebst unvermeidbaren Verunreinigungen, - wobei die nachfolgenden Elemente bis zu den angegebenen Gehalten toleriert werden: Ni: max. 0,03 %, Al: max. 0,05 %, Si: max. 0,01 %, Cr: max. 0,01 %.

IPC 8 full level
C22C 9/04 (2006.01)

CPC (source: CN EP KR US)
C22C 9/04 (2013.01 - CN EP KR US); **C22F 1/08** (2013.01 - KR)

Citation (applicant)
EP 3690069 A1 20200805 - POONGSAN CORP [KR]

Citation (search report)

- [XAI] JP H03253527 A 19911112 - KOBE STEEL LTD
- [IA] JP S59153856 A 19840901 - NIPPON MINING CO
- [A] JP S544814 A 19790113 - KOBE STEEL LTD
- [A] JP 2016194122 A 20161117 - DOWA METALTECH KK

Cited by
EP4289980A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3992320 A1 20220504; BR 102021020600 A2 20220510; CN 114427051 A 20220503; JP 2022074112 A 20220517; KR 20220057455 A 20220509; US 2022136086 A1 20220505

DOCDB simple family (application)
EP 20204628 A 20201029; BR 102021020600 A 20211014; CN 202111245863 A 20211026; JP 2021177365 A 20211029; KR 20210144954 A 20211027; US 202117499208 A 20211012