

Title (en)
Lead-free copper alloy and use thereof

Title (de)
Bleifreie Kupferlegierung und deren Verwendung

Title (fr)
Alliage de cuivre sans plomb et son utilisation

Publication
EP 1452613 A3 20040922 (DE)

Application
EP 04002009 A 20040130

Priority
DE 10308778 A 20030228

Abstract (en)
[origin: EP1452613A2] The Cu-Zn-Si based alloy comprises in wt%: Cu 70-83, Si 1-5. The following matrix-active elements are also included: Sn 0.01-2, Fe and/or Co 0.01-3, Ni 0.01-0.3, Mn 0.01-0.3, P up to 0.1 (optional), and up to 0.5% of Ag, Al, As, Mg, Sb, Ti, Zr. The remainder is Zn, with inevitable impurities.

IPC 1-7
C22C 9/10

IPC 8 full level
C22C 9/04 (2006.01); **C22C 9/10** (2006.01)

CPC (source: EP US)
C22C 9/04 (2013.01 - EP US); **C22C 9/10** (2013.01 - EP US)

Citation (search report)

- [X] DE 10065735 A1 20011018 - DOWA MINING CO [JP]
- [XA] GB 350750 A 19310618 - HIRSCH KUPFER & MESSINGWERKE
- [XA] US 1954003 A 19340410 - EUGEN VADERS
- [XA] US 2002057985 A1 20020516 - LING LE [JP], et al
- [XA] DE 836567 C 19520515 - EUGEN VADERS DR
- [XA] FR 1031211 A 19530622
- [XA] PATENT ABSTRACTS OF JAPAN vol. 1998, no. 04 31 March 1998 (1998-03-31)
- [XA] PATENT ABSTRACTS OF JAPAN vol. 1997, no. 10 31 October 1997 (1997-10-31)
- [A] PATENT ABSTRACTS OF JAPAN vol. 016, no. 126 (C - 0923) 31 March 1992 (1992-03-31)
- [A] PATENT ABSTRACTS OF JAPAN vol. 017, no. 333 (C - 1074) 24 June 1993 (1993-06-24)
- [A] PATENT ABSTRACTS OF JAPAN vol. 014, no. 037 (C - 680) 24 January 1990 (1990-01-24)
- [A] PATENT ABSTRACTS OF JAPAN vol. 018, no. 604 (C - 1275) 17 November 1994 (1994-11-17)
- [A] PATENT ABSTRACTS OF JAPAN vol. 2000, no. 20 10 July 2001 (2001-07-10)
- [A] PATENT ABSTRACTS OF JAPAN vol. 2000, no. 06 22 September 2000 (2000-09-22)

Cited by
EP1936388A1; CN104018047A; GB2627162A; GB2614752B; WO2012104426A2; WO2023138974A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)
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DOCDB simple family (application)
EP 04002009 A 20040130; AT 04002009 T 20040130; AU 2004200784 A 20040227; CA 2458723 A 20040225; CN 200410004293 A 20040218; DE 10308778 A 20030228; DE 502004005634 T 20040130; DK 04002009 T 20040130; JP 2004041154 A 20040218; US 78803704 A 20040226