

Title (en)

Wrought product in Al-Cu-Mg alloy for aircraft structural element

Title (de)

Knetprodukt aus Al-Cu-Mg-Legierung für das Strukturbauteil eines Flugzeugs

Title (fr)

Produit corroyé en alliage Al-Cu-Mg pour élément de structure d'avion

Publication

EP 1382698 B2 20130109 (FR)

Application

EP 03356108 A 20030709

Priority

FR 0208737 A 20020711

Abstract (en)

[origin: EP1382698A1] Weldable product, notably rolled, drawn or forged, is made in an alloy with the following composition (by weight %): (a) Cu: 3.8 - 4.3; (b) Mg: 1.25 - 1.45; (c) Mn: 0.2 - 0.5; (d) Zn: 0.4 - 1.3; (e) Fe less than 0.15; (f) Si less than 0.15; (g) Zr at most 0.05; (h) Ag less than 0.01; (i) other elements each less than 0.05 and less than 0.15 in total; (j) remainder Al; (k) treated by putting into solution, tempering and cold drawing, with a permanent deformation of between 0.5 and 15 %, and preferably of between 1.5 and 3.5 %. The cold drawing is achieved by controlled traction and/or cold transformation, such as rolling or drawing. Independent claims are also included for: (i) a plated sheet of this alloy; (ii) an aircraft structural element of this alloy; (iii) a method for the fabrication of a weldable product of this alloy.

IPC 8 full level

C22C 21/12 (2006.01); **C22C 21/16** (2006.01); **C22C 21/18** (2006.01); **C22F 1/057** (2006.01)

CPC (source: EP US)

C22C 21/16 (2013.01 - EP US); **C22C 21/18** (2013.01 - EP US); **C22F 1/057** (2013.01 - EP US); **Y10T 428/12764** (2015.01 - EP US)

Citation (opposition)

Opponent :

JP H03236441 A 19911022 - NIPPON KOKAN KK

Cited by

CN104711498A; CN104451298A; US8877123B2; WO2008003503A3; US10472707B2; EP2121997B2

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DOCDB simple family (publication)

EP 1382698 A1 20040121; **EP 1382698 B1 20040526**; **EP 1382698 B2 20130109**; AT E267885 T1 20040615; DE 60300004 D1 20040701; DE 60300004 T2 20050120; DE 60300004 T3 20130620; ES 2220902 T3 20041216; ES 2220902 T5 20130509; FR 2842212 A1 20040116; FR 2842212 B1 20040813; US 2004086418 A1 20040506; US 2008210350 A1 20080904; US 7294213 B2 20071113; US 7993474 B2 20110809

DOCDB simple family (application)

EP 03356108 A 20030709; AT 03356108 T 20030709; DE 60300004 T 20030709; ES 03356108 T 20030709; FR 0208737 A 20020711; US 61287803 A 20030707; US 86530007 A 20071001