

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 A1 20040121 (FR)

Application

EP 03356108 A 20030709

Priority

FR 0208737 A 20020711

Abstract (en)

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.

Abstract (fr)

L'invention concerne un produit corroyé, notamment un produit laminé, filé ou forgé, en alliage de composition (% en poids) : Cu 3,8 - 4,3 , Mg 1,25 - 1,45 , Mn 0,2 - 0,5 , Zn 0,4 - 1,3 , Fe < 0,15 , Si < 0,15 , Zr <= 0,05, Ag < 0,01 autres éléments < 0,05 chacun et < 0,15 au total, reste Al traité par mise en solution, trempe, et écrouissage à froid, avec une déformation permanente comprise entre 0,5 et 15%, et de préférence entre 1,5 et 3,5%. L'écrouissage à froid peut être obtenu par traction contrôlée et/ou transformation à froid, par exemple laminage, matriçage ou étirage. Ce produit, sous forme de tôle plaquée, se prête bien à l'utilisation comme élément de revêtement de fuselage d'aéronef.

IPC 1-7

C22C 21/12; **C22C 21/16**; **C22C 21/18**

IPC 8 full level

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 (search report)

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DOCDB simple family (application)

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