

Title (en)
WROUGHT PRODUCT OF AN ALLOY OF ALUMINIUM, MAGNESIUM, LITHIUM

Title (de)
KNETPRODUKT AUS EINER ALUMINIUM MAGNESIUM LITHIUM LEGIERUNG

Title (fr)
PRODUIT CORROYE EN ALLIAGE ALUMINIUM MAGNESIUM LITHIUM

Publication
EP 3201370 B1 20200415 (FR)

Application
EP 15785159 A 20150929

Priority
• FR 1402186 A 20140929
• FR 1402187 A 20140929
• FR 2015052580 W 20150929

Abstract (en)
[origin: WO2016051060A1] The invention relates to a wrought product made of aluminum alloy having the composition, in percentage by weight, of Mg: 4.0-5.0; Li: 1.0-1.8; Mn: 0.3-0.5; Zr: 0.05-0.15; Ag: ≤ 0.5 ; Fe: ≤ 0.1 ; Ti: <0.15 ; Si: ≤ 0.05 ; other elements ≤ 0.05 each and ≤ 0.15 in association; the remainder is aluminum. The invention further relates to a method for manufacturing such a wrought product, in which an unprocessed form of aluminum alloy is poured, which has the composition, in percentage by weight, of Mg: 4.0-5.0; Li: 1.0-1.8; Mn: 0.3-0.5; Zr: 0.05-0.15; Ag: ≤ 0.5 ; Fe: ≤ 0.1 ; Ti: <0.15 ; Si: ≤ 0.05 ; other elements ≤ 0.05 each and ≤ 0.15 in association; the remainder is aluminum. Optionally, said unprocessed form is homogenized; said unprocessed form is hot-worked to obtain a hot-worked product; optionally, said hot-worked product is placed in a solution at a temperature of 360°C to 460°C, preferably of 380°C to 420°C, for 15 minutes to 8 hours; said hot-worked product is quenched; optionally, said hot-worked and quenched product is straightened, optionally, the worked product is cold-worked under controlled conditions to obtain permanent cold working of 1 to 10 %, preferably 2 to 6%, most preferably 3 to 5%; said worked and quenched product is tempered. The invention also relates to the use of said wrought product to produce aircraft structural elements.

IPC 8 full level
C22C 21/06 (2006.01); **C22C 21/08** (2006.01); **C22F 1/047** (2006.01)

CPC (source: CN EP KR US)
C22C 21/06 (2013.01 - CN EP KR US); **C22C 21/08** (2013.01 - CN EP US); **C22F 1/002** (2013.01 - CN); **C22F 1/047** (2013.01 - CN EP KR US)

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

DOCDB simple family (publication)
WO 2016051060 A1 20160407; BR 112017006131 A2 20171219; BR 112017006273 A2 20171212; BR 112017006273 B1 20210608; CA 2960942 A1 20160407; CA 2960947 A1 20160407; CN 106715735 A 20170524; CN 107075623 A 20170818; EP 3201370 A1 20170809; EP 3201370 B1 20200415; EP 3201371 A1 20170809; EP 3201371 B1 20210428; JP 2017532456 A 20171102; KR 20170067810 A 20170616; US 2017218493 A1 20170803; US 2017292180 A1 20171012; WO 2016051061 A1 20160407

DOCDB simple family (application)
FR 2015052580 W 20150929; BR 112017006131 A 20150929; BR 112017006273 A 20150929; CA 2960942 A 20150929; CA 2960947 A 20150929; CN 201580052804 A 20150929; CN 201580052806 A 20150929; EP 15785159 A 20150929; EP 15785160 A 20150929; FR 2015052581 W 20150929; JP 2017535970 A 20150929; KR 20177011944 A 20150929; US 201515514398 A 20150929; US 201515514802 A 20150929