

Title (en)
IMPROVED PROCESS FOR MANUFACTURING SHEETS MADE OF ALUMINIUM-COPPER-LITHIUM ALLOY FOR AIRCRAFT FUSELAGE
MANUFACTURE AND CORRESPONDING SHEET

Title (de)
VERBESSERTES VERFAHREN ZUR HERSTELLUNG VON BLECHEN AUS EINER ALUMINIUM-KUPFER-LITHIUM-LEGIERUNG FÜR DIE
HERSTELLUNG VON FLUGZEUGRÜMPFEN UND ENTSPRECHENDEM BLECH

Title (fr)
PROCEDE DE FABRICATION AMELIORE DE TÔLES EN ALLIAGE D'ALUMINIUM-CUIVRE-LITHIUM POUR LA FABRICATION DE FUSELAGE
D'AVION ET TÔLE CORRESPONDANTE

Publication
EP 3728667 B1 20220622 (FR)

Application
EP 18833951 A 20181217

Priority
• FR 1762674 A 20171220
• FR 2018053316 W 20181217

Abstract (en)
[origin: CA3085811A1] The subject of the invention is a process for manufacturing a wrought product made of aluminium alloy comprising the following steps : a) casting a plate made of alloy comprising, in percentages by weight, Cu: 2.1 to 2.8; Li: 1.1 to 1.7; Mg: 0.2 to 0.9; Mn: 0.2 to 0.6; Ti: 0.010.2; Ag < 0.1; Zr < 0.08; Fe and Si = 0.1 each; unavoidable impurities = 0.05% each and 0.15% in total; remainder aluminium; b) homogenizing said plate at 480-520 °C for 5 to 60 hours; c) hot-rolling and optionally cold-rolling said homogenized plate to give a sheet; d) solution annealing the sheet at 470-520 °C for 5 minutes to 4 hours; e) quenching the solution-annealed sheet; f) controlled tensioning of the solution-annealed and quenched sheet with a permanent set of 1 to 6%; g) tempering of the tensioned sheet by heating at a temperature of at least 160 °C for a maximum time of 30 hours.

IPC 8 full level
C22C 21/12 (2006.01); **C22C 21/14** (2006.01); **C22C 21/16** (2006.01); **C22F 1/057** (2006.01)

CPC (source: EP US)
C21D 8/0226 (2013.01 - US); **C21D 8/0236** (2013.01 - US); **C21D 8/0273** (2013.01 - US); **C22C 21/12** (2013.01 - EP); **C22C 21/14** (2013.01 - EP); **C22C 21/16** (2013.01 - EP US); **C22F 1/057** (2013.01 - EP US)

Cited by
CN111945084A

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)
FR 3075078 A1 20190621; **FR 3075078 B1 20201113**; CA 3085811 A1 20190627; CN 111492074 A 20200804; EP 3728667 A1 20201028; EP 3728667 B1 20220622; JP 2021508357 A 20210304; US 11732333 B2 20230822; US 2021071285 A1 20210311; WO 2019122639 A1 20190627

DOCDB simple family (application)
FR 1762674 A 20171220; CA 3085811 A 20181217; CN 201880082024 A 20181217; EP 18833951 A 20181217; FR 2018053316 W 20181217; JP 2020530363 A 20181217; US 201816955424 A 20181217