

Title (en)

FORGED ALUMINUM ALLOY MATERIAL AND METHOD FOR PRODUCING SAME

Title (de)

GESCHMIEDETES ALUMINIUMLEGIERUNGSMATERIAL UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)

MATÉRIAU D'ALLIAGE D'ALUMINIUM FORGÉ ET SON PROCÉDÉ DE PRODUCTION

Publication

**EP 3124633 A4 20171025 (EN)**

Application

**EP 15770178 A 20150313**

Priority

- JP 2014066679 A 20140327
- JP 2014258032 A 20141219
- JP 2015057581 W 20150313

Abstract (en)

[origin: EP3124633A1] Provided are: a forged aluminum alloy that offers high strength and high toughness and still has excellent corrosion resistance even when having a smaller thickness; and a method for producing the forged aluminum alloy. The forged aluminum alloy contains Mg in a content of 0.70 to 1.50 mass percent, Si in a content of 0.80 to 1.30 mass percent, Cu in a content of 0.30 to 0.90 mass percent, Fe in a content of 0.10 to 0.40 mass percent, Ti in a content of 0.005 to 0.15 mass percent, and at least one element selected from the group consisting of Mn in a content of 0.10 to 0.60 mass percent, Cr in a content of 0.10 to 0.45 mass percent, and Zr in a content of 0.05 to 0.30 mass percent, with the remainder consisting of Al and inevitable impurities. The forged aluminum alloy has a major axis of Q phase of 50 to 500 nm in a maximum-stress-receiving region.

IPC 8 full level

**C22C 21/06** (2006.01); **B21J 5/00** (2006.01); **C22C 21/02** (2006.01); **C22F 1/00** (2006.01); **C22F 1/05** (2006.01)

CPC (source: EP)

**B21J 5/00** (2013.01); **B21K 1/74** (2013.01); **C22C 21/02** (2013.01); **C22C 21/06** (2013.01); **C22C 21/08** (2013.01); **C22F 1/043** (2013.01); **C22F 1/047** (2013.01); **C22F 1/05** (2013.01)

Citation (search report)

- [X] EP 2003219 A2 20081217 - KOBE STEEL LTD [JP]
- [X] JP 2004315938 A 20041111 - KOBE STEEL LTD
- [A] EP 2554698 A1 20130206 - KOBE STEEL LTD [JP]
- See references of WO 2015146654A1

Cited by

EP3737527A4; US11207760B2; US11932928B2; US11519058B2; US11420249B2; WO2017106665A1; DE102017116556A1; WO2019016394A1; DE102017116556B4; US10513766B2; US11920229B2; US12043887B2

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)

**EP 3124633 A1 20170201**; **EP 3124633 A4 20171025**; **EP 3124633 B1 20191204**; CN 106103765 A 20161109; CN 106103765 B 20191108; JP 2015193903 A 20151105; JP 5901738 B2 20160413; WO 2015146654 A1 20151001

DOCDB simple family (application)

**EP 15770178 A 20150313**; CN 201580014882 A 20150313; JP 2014258032 A 20141219; JP 2015057581 W 20150313