

Title (en)

ALUMINUM ALLOY HAVING EXCELLENT WEAR RESISTANCE, EXTRUDABILITY, AND FORGING WORKABILITY

Title (de)

ALUMINIUMLEGIERUNG MIT HERVORRAGENDER ABRIEBFESTIGKEIT, EXTRUDIERBARKEIT UND SCHMIEDEBEARBEITBARKEIT

Title (fr)

ALLIAGE D'ALUMINIUM PRÉSENTANT UNE RÉSISTANCE À L'USURE, UNE APTITUDE À L'EXTRUSION ET UNE APTITUDE AU FAÇONNAGE PAR FORGEAGE D'EXCELLENTE QUALITÉ

Publication

EP 2811041 A1 20141210 (EN)

Application

EP 12867174 A 20120201

Priority

JP 2012052215 W 20120201

Abstract (en)

Productivity of an aluminum alloy such as extrusion property and forging property are improved, while satisfying the required properties, by optimizing the amount of elements contained in the aluminum alloy. The aluminum alloy contains 5.5 to 7.0% of Si, 1.0 to 2.0% of Cu, 0.4 to 0.8% of Mg, 0.05 to 0.15% of Cr, 0.05 to 0.25% of Ni, and when further desired, 0.01 to 0.05% of Sr. The rest of the aluminum alloy is Al and unavoidable impurities. When Sc is defined as the size of the eutectic Si in the central portion of the cross section which is vertical with respect to the longitudinal direction of the aluminum alloy extruded, and Ss is defined as the size of the eutectic Si at the surface side of the cross section of the extrusion material, the aluminum alloy satisfies the equation of "Sc-Ss #² 15 μm²", and the number of the particles having the size of 20μm² or smaller is 1000 to 3000 /mm².

IPC 8 full level

C22C 21/02 (2006.01); **C22F 1/043** (2006.01)

CPC (source: EP)

B21C 23/002 (2013.01); **B21J 1/003** (2013.01); **C22C 21/02** (2013.01); **C22C 21/04** (2013.01); **C22F 1/043** (2013.01)

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 2811041 A1 20141210; **EP 2811041 A4 20150902**; **EP 2811041 B1 20160706**; CN 104160049 A 20141119; CN 104160049 B 20160914; WO 2013114582 A1 20130808

DOCDB simple family (application)

EP 12867174 A 20120201; CN 201280068314 A 20120201; JP 2012052215 W 20120201