

Title (en)
USE OF AN ALUMINIUM ALLOY FOR THE PRODUCTION OF SEMI-FINISHED PRODUCTS OR COMPONENTS FOR MOTOR VEHICLES

Title (de)
VERWENDUNG EINER ALUMINIUMLEGIERUNG ZUR HERSTELLUNG VON HALBZEUGEN ODER BAUTEILEN FÜR KRAFTFAHRZEUGE

Title (fr)
UTILISATION D'UN ALLIAGE EN ALUMINIUM POUR LA FABRICATION DE DEMI-PRODUITS OU DE COMPOSANTS POUR VÉHICULES AUTOMOBILES

Publication
EP 2959028 B1 20160727 (DE)

Application
EP 14705528 A 20140220

Priority
• EP 13156100 A 20130221
• EP 2014053323 W 20140220
• EP 14705528 A 20140220

Abstract (en)
[origin: EP2770071A1] An aluminum alloy comprises 0.8 wt.% or less iron, 0.5 wt.% or less silicon, 0.9-1.5 wt.% manganese, 0.25 wt.% or less magnesium, 0.125 wt.% or less copper, 0.05 wt.% or less chromium, 0.05 wt.% or less titanium, 0.05 wt.% or less zirconium, and remainder of aluminum and unavoidable elements at less than 0.05 wt.% individually and less than 0.15 wt.% in total. The total content of magnesium and copper is 0.15-0.25 wt.%. The proportion of magnesium in the aluminum alloy is more than the proportion of copper in the aluminum alloy. Independent claims are included for the following: (1) preparation of aluminum alloy strip; and (2) aluminum alloy strip.

IPC 8 full level
B62D 29/00 (2006.01); **C22C 21/00** (2006.01); **C22F 1/04** (2006.01)

CPC (source: EP RU US)
B22D 7/005 (2013.01 - US); **C22C 21/00** (2013.01 - EP RU US); **C22F 1/04** (2013.01 - EP US); **C22F 1/04** (2013.01 - RU)

Citation (opposition)
Opponent : Aleris Aluminum Duffel BVBA
• WO 2005118899 A1 20051215 - CORUS ALUMINIUM WALZPROD GMBH [DE], et al
• EP 0823305 A2 19980211 - DENSO CORP [JP], et al
• JP 2012149354 A 20120809 - KOBE STEEL LTD
• US 5028276 A 19910702 - BYRNE STEPHEN C [US], et al
• ANONYMOUS: "Registration Record Series Teal Sheets", THE ALUMINIUM ASSOCIATION, 2 January 2009 (2009-01-02), pages 4, XP055377746
• "- Rolled Products", THE ALUMINIUM AUTOMOTIVE MANUAL PRODUCTS, 2002, pages 1 - 42, XP055377757
• "Design Methodology", THE ALUMINIUM AUTOMOTIVE MANUAL DESIGN -, 2011, pages 1 - 20, XP055377750
• GOVINDARAJ, NAGARAJ VINAYAGAM ET AL.: "Threshold deformation for exhibiting the hardening on annealing behaviour in AA3103 alloy", 13TH INTERNATIONAL CONFERENCE ON ALUMINUM ALLOYS, 2012, pages 1873 - 1878, XP055377748
• LOK, ZACHARIAS JOHANNES: "Microchemistry in aluminium sheet production", PHD THESIS, TECHNISCHE UNIVERSITEIT DELFT, 2005, pages 1 - 3, XP055377751, ISBN: 90-771-7215-7
• HAKONSEN, ARILD ET AL.: "Modelling the metallurgical reactions during homogenisation of an AA3103 alloy", LIGHT METALS, 2002, pages 1028 - 1035, XP055377752
• LANGERWEGER, J.: "Influence of homogenizing on the properties of cast aluminium products", LIGHT METALS, 1982, pages 1036 - 1042, XP055377756

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 2770071 A1 20140827; EP 2770071 B1 20170201; EP 2770071 B2 20200401; EP 2770071 B9 20200812; CA 2899991 A1 20140828; CA 2899991 C 20170502; CN 105008563 A 20151028; CN 105008563 B 20180525; EP 2959028 A1 20151230; EP 2959028 B1 20160727; EP 2959028 B2 20190710; ES 2590779 T3 20161123; ES 2590779 T5 20200311; ES 2621871 T3 20170705; JP 2016514206 A 20160519; JP 6143892 B2 20170607; KR 101656419 B1 20160909; KR 20150119369 A 20151023; PT 2770071 T 20170419; PT 2959028 T 20160919; RU 2015139899 A 20170324; RU 2637458 C2 20171204; US 10501833 B2 20191210; US 2015368771 A1 20151224; WO 2014128212 A1 20140828; WO 2014128212 A9 20141127

DOCDB simple family (application)
EP 13156100 A 20130221; CA 2899991 A 20140220; CN 201480009934 A 20140220; EP 14705528 A 20140220; EP 2014053323 W 20140220; ES 13156100 T 20130221; ES 14705528 T 20140220; JP 2015558448 A 20140220; KR 20157025451 A 20140220; PT 13156100 T 20130221; PT 14705528 T 20140220; RU 2015139899 A 20140220; US 201514826244 A 20150814