

Title (en)  
Heat resistant aluminium alloy

Title (de)  
Warmfeste Aluminiumlegierung

Title (fr)  
Alliage d'aluminium résistant à la chaleur

Publication  
**EP 1757709 A1 20070228 (DE)**

Application  
**EP 06405085 A 20060228**

Priority  
CH 13712005 A 20050822

Abstract (en)  
Heat resistant Al alloy of type AlMgSi of long lasting heat resistance for production of thermally and mechanically strained cast components, where the contents of alloying elements Mg and Si in wt.% in a Cartesian coordinate system is restricted by a polygon A with specific coordinates and the alloy contains (wt.%):Mn (0.1-1), and maximum amounts of Fe (1.0), Cu (3.0), Ni (2.0), Cr (0.5), Co (0.6), Zn (0.2), Ti (0.2), Zr (0.5), Be (0.008), V (.5), remainder Al and impurities to an individual maximum of 0.05 wt.5 and total maximum of 0.2 wt.%.

IPC 8 full level  
**C22C 21/08** (2006.01)

CPC (source: EP KR NO US)  
**C22C 21/06** (2013.01 - KR); **C22C 21/08** (2013.01 - EP KR NO US); **C22F 1/05** (2013.01 - EP US)

Citation (applicant)  

- US 3868250 A 19750225 - ZIMMERMANN PAUL
- WO 9615281 A1 19960523 - RHEINFELDEN ALUMINIUM GMBH [DE], et al
- WO 0043560 A1 20000727 - ALUMINIUM LEND GMBH [AT], et al
- EP 1234893 A1 20020828 - ALCAN TECH & MAN AG [CH]
- F. J. FEIKUS: "GIESSEREI-PRAXIS", 1999, article "Optimierung von Aluminium-Silicium- Gusslegierungen für Zylinderköpfe", pages: 50 - 57

Citation (search report)  

- [AD] US 3868250 A 19750225 - ZIMMERMANN PAUL
- [AD] EP 1234893 A1 20020828 - ALCAN TECH & MAN AG [CH]
- [A] ZIMMERMANN P ET AL: "WARMFESTE ALUMINIUM-MAGNESIUM-SILIZIUM-GUSSLEGIERUNGEN FUER TEMPARATURWECHSELBEANSPRUCHTE GUSSSTÜCKE HEAT-RESISTANT ALUMINUM-MAGENSIUM-SILICON CASTING ALLOYS FOR CASTINGS SUBJECT TO FLUCTUATING THERMAL STRESS", ALUMINIUM, ALUMINIUM VERLAG, DUESSELDORF, DE, vol. 56, no. 5, May 1980 (1980-05-01), pages 323 - 328, XP009054856, ISSN: 0002-6689
- [AD] FEIKUS F J: "OPTIMIERUNG VON ALUMINIUM-SILICIUM-GUSSLEGIERUNGEN FUER ZYLINDERKOEPFEN", GIESSEREI-PRAXIS, SCHIELE & SCHON. BERLIN, DE, vol. 2, 1999, pages 50 - 57, XP009054925

Cited by  
DE102011014590A1; WO2020126198A1; DE102011014590A8; EP2415889A4; US10590518B2; WO2015121635A1; EP3670689A1; EP3670689B1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)  
AL BA HR MK YU

DOCDB simple family (publication)  
**EP 1757709 A1 20070228; EP 1757709 B1 20071017**; AT E376075 T1 20071115; BR PI0603394 A 20070427; BR PI0603394 B1 20140729; CA 2556645 A1 20070222; CA 2556645 C 20140114; CN 100999797 A 20070718; CN 100999797 B 20110126; DE 502006000145 D1 20071129; JP 2007084922 A 20070405; JP 5007086 B2 20120822; KR 101409586 B1 20140620; KR 20070022610 A 20070227; MX PA06009523 A 20070301; NO 20063736 L 20070223; NO 343257 B1 20190102; US 2010074796 A1 20100325

DOCDB simple family (application)  
**EP 06405085 A 20060228**; AT 06405085 T 20060228; BR PI0603394 A 20060822; CA 2556645 A 20060821; CN 200610143179 A 20060822; DE 502006000145 T 20060228; JP 2006222957 A 20060818; KR 20060079102 A 20060822; MX PA06009523 A 20060822; NO 20063736 A 20060821; US 50676506 A 20060818