

Title (en)

HIGH PERFORMANCE AISIMGCU CASTING ALLOY

Title (de)

HOCHLEISTUNGS-ALSIMGCU-GUSS-LEGIERUNG

Title (fr)

ALLIAGE DE MOULAGE PAR COULÉE D'ALSIMGCU À HAUTE PERFORMANCE

Publication

EP 2771493 A2 20140903 (EN)

Application

EP 12787267 A 20121026

Priority

- US 201161628321 P 20111028
- US 2012062250 W 20121026

Abstract (en)

[origin: WO2013063488A2] An aluminum casting alloy has 8.5 - 9.5 wt. % silicon, 0.5 - 2.0 wt. % copper (Cu), 0.27 - 0.53 wt. % magnesium (Mg), wherein the aluminum casting alloy includes copper and magnesium such that $4.7 < (Cu+Mg) < 5.8$, and other elements, the balance being aluminum. Selected elements may be added to the base composition to give resistance to degradation of tensile properties due to exposure to heat. The thermal treatment of the alloy is calculated based upon wt. % composition to solutionize unwanted phases having a negative impact on properties and may include a three level ramp-up and soak to a final temperature followed by cold water quenching and artificial aging.

IPC 8 full level

C22C 21/02 (2006.01); **C22C 21/04** (2006.01)

CPC (source: CN EP)

C22C 21/02 (2013.01 - CN EP); **C22C 21/04** (2013.01 - EP); **C22F 1/043** (2013.01 - CN EP)

Citation (search report)

See references of WO 2013063488A2

Cited by

EP3342890A1; EP3342888A1; EP3342889A1

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)

WO 2013063488 A2 20130502; WO 2013063488 A3 20131031; BR 112014010030 A2 20170425; BR 112014010030 A8 20180102; BR 112014010030 B1 20181106; CA 2853728 A1 20130502; CA 2853728 C 20210525; CN 104093867 A 20141008; CN 104093867 B 20170503; CN 107245612 A 20171013; CN 107245612 B 20190416; EP 2771493 A2 20140903; EP 2771493 B1 20160914; EP 2771493 B8 20170809; EP 2771493 B9 20170927; ES 2607728 T3 20170403; MX 2014005099 A 20150212; MX 347730 B 20170511; PL 2771493 T3 20170831

DOCDB simple family (application)

US 2012062250 W 20121026; BR 112014010030 A 20121026; CA 2853728 A 20121026; CN 201280056407 A 20121026; CN 201710258579 A 20121026; EP 12787267 A 20121026; ES 12787267 T 20121026; MX 2014005099 A 20121026; PL 12787267 T 20121026