

Title (en)

IMPROVED ALUMINIUM BASED CASTING ALLOY

Title (de)

VERBESSERTE GUSSLEGIERUNG AUF ALUMINIUMBASIS

Title (fr)

ALLIAGE POUR COULÉE À BASE D'ALUMINIUM AMÉLIORÉ

Publication

EP 2285995 A1 20110223 (EN)

Application

EP 09737538 A 20090430

Priority

- AU 2009000532 W 20090430
- AU 2008902123 A 20080430

Abstract (en)

[origin: WO2009132388A1] An aluminium based alloy has a weight percentage composition of from 5 to 15% silicon, 0 to 0.25% magnesium, 0 to 0.25% titanium, 0.2 to 0.65% manganese, 0.1 to 0.6% iron, 1 to 4% copper, 0 to 3% zinc, less than 0.01% in total of silicon modifiers (with less than 0.007% strontium), less than 0.05% tin, less than 0.2% in total of other transition or rare earth metals (with less than 0.05% chromium), less than 0.5% in total other elements, and a balance of aluminium. The limits for iron and manganese are constrained such that the amount of iron present in the alloy is 0.4 to 1.6 times the manganese content and the alloy has a sludge factor (SF), calculated as $SF = (1 \times \text{wt\% Fe}) + (2 \times \text{wt\% Mn})$, of from 0.8 to 1.6. A casting made from the alloy has enhanced fracture resistance relative to casting of the same product made of a conventional HPDC alloy when compared in the as cast or same heat treated state.

IPC 8 full level

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

CPC (source: EP US)

C22C 21/02 (2013.01 - EP US)

Citation (search report)

See references of WO 2009132388A1

Designated contracting state (EPC)

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Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

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