

Title (en)

Magnesium alloy containing rare earth metals

Title (de)

Seltenerdmetalle enthaltende Magnesiumlegierung

Title (fr)

Alliage de magnésium contenant des métaux de terres rares

Publication

**EP 2481825 B1 20130508 (EN)**

Application

**EP 11152827 A 20110201**

Priority

EP 11152827 A 20110201

Abstract (en)

[origin: EP2481825A1] The present invention relates to single-phase solid solution magnesium alloys suitable for the applications as cast or wrought. These alloys are prepared by multi-microalloying with rare earth elements (including gadolinium, yttrium, dysprosium, samarium, lanthanum, cerium, neodymium and praseodymium). Each alloy contains 0.5 to less than 5 wt.% rare earth elements with a content of 0.05-2.0 % by weight. The total amount of rare earth elements is controlled below 5 % by weight in order for economical considerations. The amount of grain refiner calcium or zirconium is in the range of 0.05-0.6 % by weight. These alloys can be prepared by die casting, permanent casting, chill casting, semi-solid processes, continuous casting and continuous twin roll casting.

IPC 8 full level

**C22C 23/04** (2006.01); **C22C 23/06** (2006.01)

CPC (source: EP US)

**C22C 23/04** (2013.01 - EP US); **C22C 23/06** (2013.01 - EP US)

Citation (examination)

- YAMADA KENTARO ET AL: "Precipitate microstructures of high strength Mg-Gd-Y- Zn - Zr alloys", 1 January 2006, ADVANCED MATERIALS RESEARCH,, PAGE(S) 417 - 420, ISSN: 1022-6680, XP009092939
- HONMA ET AL: "Effect of Zn additions on the age-hardening of Mg-2.0Gd-1.2Y-0.2Zr alloys", ACTA MATERIALIA, ELSEVIER, OXFORD, GB, vol. 55, no. 12, 8 June 2007 (2007-06-08), pages 4137 - 4150, XP022110797, ISSN: 1359-6454, DOI: 10.1016/J.ACTAMAT.2007.02.036

Cited by

CN112941385A; CN111155014A; CN104131204A; CN103820689A; CN104690236A; CN115233061A; CN104278185A; CN114892055A

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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 2481825 A1 20120801**; **EP 2481825 B1 20130508**; CA 2765484 A1 20120801; CN 102628134 A 20120808; CN 102628134 B 20160629; ES 2423354 T3 20130919; US 2012195787 A1 20120802

DOCDB simple family (application)

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