Title (en)

HIGH PERFORMANCE CREEP RESISTANT MAGNESIUM ALLOYS

Title (de)

KRIECHBESTÄNDIGE HOCHLEISTUNGSMAGNESIUMLEGIERUNGEN

Title (fr)

ALLIAGES DE MAGNÉSIUM RÉSISTANTS AU FLUAGE ET À HAUTE PERFORMANCE

Publication

**EP 3097217 A4 20170920 (EN)**

Application

**EP 14879634 A 20140717**

Priority

- IL 23063114 A 20140123
- IL 2014050649 W 20140717

Abstract (en)

[origin: WO2015111035A1] A magnesium based alloy consisting of, by weight: at least 94.8% magnesium, 2.5-4.6% neodymium, 0.05-0.40%) yttrium, and 0.03-0.65%) zirconium and incidental impurities. Optionally, the alloy further contains up to 0.02%>wt. calcium. The alloy is suitable for high pressure die casting (HPDC) as well as for sand casting, investment casting, permanent mold casting, twin roll casting and direct chill casting. The disclosed alloy exhibits good castability, high strength, high corrosion resistance and high creep resistance at room temperature, as well as in high temperatures.

IPC 8 full level

**B22D 21/00** (2006.01); **C22C 23/06** (2006.01); **C22F 1/06** (2006.01)

CPC (source: EP US)

**B22D 21/007** (2013.01 - EP US); **C22C 23/06** (2013.01 - EP US); **C22F 1/06** (2013.01 - EP US)

Citation (search report)

- [A] WO 2010038016 A1 20100408 - MAGNESIUM ELEKTRON LTD, et al
- [A] EP 1866452 B1 20120620 - CAST CENTRE PTY LTD [AU]
- [A] EP 0813616 B1 19990908 - LUXFER GROUP LTD [GB]
- [A] EP 1897962 A1 20080312 - DEAD SEA MAGNESIUM LTD [IL], et al
- [A] ELI AGHION ET AL: "Effect of yttrium additions on the properties of grain-refined Mg-3%Nd alloy", JOURNAL OF MATERIALS SCIENCE, KLUWER ACADEMIC PUBLISHERS, BO, vol. 43, no. 14, 3 June 2008 (2008-06-03), pages 4870 - 4875, XP019607566, ISSN: 1573-4803
- See references of WO 2015111035A1

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DOCDB simple family (publication)

**WO 2015111035 A1 20150730**; CN 105934529 A 20160907; CN 105934529 B 20170905; EP 3097217 A1 20161130; EP 3097217 A4 20170920; EP 3097217 B1 20181219; IL 230631 A0 20140430; IL 230631 A 20160731; JP 2017507245 A 20170316; JP 6590814 B2 20191016; US 2016304996 A1 20161020

DOCDB simple family (application)

**IL 2014050649 W 20140717**; CN 201480073926 A 20140717; EP 14879634 A 20140717; IL 23063114 A 20140123; JP 2016548228 A 20140717; US 201415102019 A 20140717