

Title (en)

Method for shaping a magnesium-based alloy by means of extrusion

Title (de)

Verfahren zur Umformung einer Magnesiumbasislegierung durch Strangpressen

Title (fr)

Procédé de déformation d'un alliage à base de magnésium à l'aide d'extrudeuses

Publication

EP 2395119 A1 20111214 (DE)

Application

EP 10163645 A 20100521

Priority

EP 10163645 A 20100521

Abstract (en)

Producing of profiles from a magnesium-based alloy, comprises extrusion molding a magnesium-based alloy comprising zinc (2-7%), zirconium (0.1-1%), calcium (0-0.5%), rare earth elements (0.8-4%), other elements (greater than 0.30%) and magnesium (remaining amount) at an extrusion molding rate of greater than 3 m/minute.

Abstract (de)

Die vorliegende Erfindung betrifft ein Verfahren zur Herstellung von Profilen aus einer Magnesiumbasislegierung durch Strangpressen, dass dadurch gekennzeichnet ist, dass die Magnesiumbasislegierung (m) 2.0-7.0% Zink, (n) 0.1-1.0% Zirkon, (o) 0.0-0.5% Calcium, (p) 0.8-4.0% Seltenerdelemente, (q) < 0.30% andere Elemente, (r) Magnesium als Rest, enthält. Mit diesem Verfahren lassen sich Magnesiumbasislegierungen mit überraschend hohen Geschwindigkeiten strangpressen.

IPC 8 full level

C22C 23/04 (2006.01); **B21C 23/00** (2006.01); **C22C 23/06** (2006.01)

CPC (source: EP)

B21C 23/002 (2013.01); **C22C 23/04** (2013.01); **C22C 23/06** (2013.01)

Citation (applicant)

- EP 0791662 B1 20010516 - HONDA MOTOR CO LTD [JP]
- US 6299834 B1 20011009 - HORIE TOSHIO [JP], et al

Citation (search report)

- [A] EP 1574590 A1 20050914 - GEESTHACHT GKSS FORSCHUNG [DE]
- [A] US 6299834 B1 20011009 - HORIE TOSHIO [JP], et al
- [X] LI LIN, ZHENG LIU, LIJIA CHEN, FENG LI: "Tensile Properties and Strengthening Mechanisms of Mg-Zn-Zr Alloys", METALS AND MATERIALS INTERNATIONAL, vol. 10, no. 6, 2004, pages 507 - 512, XP002593466
- [X] S.M. HE, L.M. PENG, X.Q. ZENG, W.J. DING, Y.P. ZHU: "Comparison of the microstructure and mechanical properties of a ZK60 alloy with and without 1.3 wt.% gadolinium addition", MATERIALS SCIENCE AND ENGINEERING, no. A433, 2006, pages 175 - 181, XP002593467
- [A] H.E. FRIEDRICH, B.L. MORDIKE: "Magnesium Technology", 2006, SPRINGER VERLAG, Heidelberg, ISBN: 3-540-20599-3, XP002593468

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CN110541100A; CN104099507A; CN102839307A; CN105483484A

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 SE SI SK SM TR

Designated extension state (EPC)

BA ME RS

DOCDB simple family (publication)

EP 2395119 A1 20111214

DOCDB simple family (application)

EP 10163645 A 20100521