

Title (en)

Manufacturing process of composite plates made of magnesium alloys and ceramic foam and composite plates

Title (de)

Herstellungsverfahren für Verbundstoffplatten aus Magnesiumlegierungen und Keramikschäum und Verbundstoffplatten

Title (fr)

Procédé de fabrication de plaques composites constituées d'alliages de magnésium, de mousse céramique et de plaques composites

Publication

EP 2556907 A3 20150610 (EN)

Application

EP 12468001 A 20120403

Priority

SI 201100124 A 20110406

Abstract (en)

[origin: EP2556907A2] Process bases on the infiltration of metal melt (matrix) in the pores of ceramic foam (hardening phase). Method of casting, sizing of mould, preheating of ceramic foam or mould, pouring temperature, use of insulating cover and vibrating enable complete filling the pores with metal. For manufacturing of composite plates the gravity casting and vibrating of total system during casting and solidification is used. Such composite plates are used in automotive, aircraft and military industry because composite plates have good mechanical properties, high break-through strength at low density and resistance to cutting.

IPC 8 full level

B22D 19/02 (2006.01); **B22D 27/08** (2006.01)

CPC (source: EP)

B22D 19/02 (2013.01); **B22D 27/08** (2013.01)

Citation (search report)

- [A] KR 20080092235 A 20081015 - MITSUI MINING & SMELTING CO [JP]
- [AD] ZESCHKY J ET AL: "Mg alloy infiltrated Si-O-C ceramic foams", MATERIALS SCIENCE AND ENGINEERING A: STRUCTURAL MATERIALS:PROPERTIES, MICROSTRUCTURE & PROCESSING, LAUSANNE, CH, vol. 403, no. 1-2, 25 August 2005 (2005-08-25), pages 215 - 221, XP027791870, ISSN: 0921-5093, [retrieved on 20050825]

Cited by

CN105328169A; CN113418399A; CN105328170A; CN114210953A; US11951540B2; WO2021047148A1

Designated contracting state (EPC)

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Designated extension state (EPC)

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