

Title (en)

Method for the production of castings for electrical applications

Title (de)

Verfahren zum Herstellen von Gussteilen für elektrische Anwendungen

Title (fr)

Procédé de fabrication de pièces moulées pour des applications électriques

Publication

EP 2756898 A3 20171018 (DE)

Application

EP 14000063 A 20140109

Priority

DE 102013000746 A 20130117

Abstract (en)

[origin: EP2756898A2] The method comprises melting and filling a hardenable aluminum alloy into a die casting mold (4), and cooling the melted aluminum alloy (1) by the mold made of a material having a thermal conductivity causing the melted aluminum alloy to be cooled at a cooling rate $\geq 5 \times 10^2$ K/s, where the melted aluminum alloy is introduced into a filling chamber (2) and is displaced at a minimal displacement speed within the filling chamber, prior to the filling step. The molten alloy is displaced at a low speed of less than 0.5 m/s in a filling chamber in the first phase. The method comprises melting and filling a hardenable aluminum alloy into a die casting mold (4), and cooling the melted aluminum alloy (1) by the mold made of a material having a thermal conductivity causing the melted aluminum alloy to be cooled at a cooling rate $\geq 5 \times 10^2$ K/s, where the melted aluminum alloy is introduced into a filling chamber (2) and is displaced at a minimal displacement speed within the filling chamber, prior to the filling step. The molten alloy is displaced at a low speed of less than 0.5 m/s in a filling chamber in the first phase. The molten alloy is moved at high speed of 1-3 m/s from the filling chamber into the die-casting mold in a second phase. The molten alloy is set after complete filling of the die under pressure.

IPC 8 full level

B22D 17/00 (2006.01); **B22D 17/10** (2006.01); **B22D 17/20** (2006.01); **B22D 17/22** (2006.01); **B22D 17/32** (2006.01); **B22D 19/00** (2006.01)

CPC (source: EP US)

B22D 17/00 (2013.01 - EP US); **B22D 17/10** (2013.01 - EP US); **B22D 17/2069** (2013.01 - EP US); **B22D 17/2209** (2013.01 - EP US); **B22D 17/32** (2013.01 - EP US); **B22D 19/0054** (2013.01 - EP US)

Citation (search report)

- [E] WO 2014051916 A2 20140403 - APPLE INC [US]
- [A] EP 2465624 A1 20120620 - KIENLE & SPIESS GMBH [DE]
- [A] WO 2008020763 A1 20080221 - NORSK HYDRO AS [NO], et al
- [T] HTTPS: "Burkhard Fuchs (Autor) Salzkerntechnologie für Hohl-gussbauteile im Druckguss", 25 July 2014 (2014-07-25), XP055334765, Retrieved from the Internet <URL:https://cuvillier.de/uploads/preview/public_file/8830/Leseprobe.pdf> [retrieved on 20170112]

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 RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 2756898 A2 20140723; **EP 2756898 A3 20171018**; **EP 2756898 B1 20201202**; DE 102013000746 A1 20140717; ES 2853579 T3 20210916; HU E053299 T2 20210628; JP 2014136258 A 20140728; JP 6488072 B2 20190320; MX 2014000520 A 20140807; US 2014196862 A1 20140717

DOCDB simple family (application)

EP 14000063 A 20140109; DE 102013000746 A 20130117; ES 14000063 T 20140109; HU E14000063 A 20140109; JP 2014005743 A 20140116; MX 2014000520 A 20140113; US 201414157584 A 20140117