

Title (en)

Process for the production of a light metal component with a cavity

Title (de)

Verfahren zur Herstellung eines mit einem Hohlraum versehenen Leichtmetall-Bauteils

Title (fr)

Procédé de fabrication d'un composant en métal léger conçu avec un espace creux

Publication

**EP 2617502 A3 20170712 (DE)**

Application

**EP 13151154 A 20130114**

Priority

DE 102012100458 A 20120120

Abstract (en)

[origin: EP2617502A2] The method comprises producing a cast part by sand casting, ingot mold casting or pressure casting, heating the cast part after solidification and a removal of sprues and feeders to a temperature of 350-500[deg] C, and inserting the cast part into a die. A kneading of a metallic structure is carried out by a smithy process under a partial transformation of the cast part in the die. The cast part is completely transformed during the smithy process. A core is used for designing the cavity, and consists of sand or salt solidified by inorganic or organic binders. The method comprises producing a cast part by sand casting, ingot mold casting or pressure casting, heating the cast part after solidification and a removal of sprues and feeders to a temperature of 350-500[deg] C, and inserting the cast part into a die. A kneading of a metallic structure is carried out by a smithy process under a partial transformation of the cast part in the die. The cast part is completely transformed during the smithy process. A core is used for designing the cavity, and consists of sand or salt solidified by inorganic or organic binders. The method is performed by a core material made of thixotropic materials. The cast part is forged after the removal from the die and without additional heating. The light metal is made of semi-finished aluminum alloy.

IPC 8 full level

**B22D 18/02** (2006.01); **B21J 5/00** (2006.01); **B22D 21/04** (2006.01)

CPC (source: EP)

**B21J 5/002** (2013.01); **B22D 18/02** (2013.01); **B22D 21/04** (2013.01)

Citation (search report)

- [X] EP 0850825 A2 19980701 - SHIMANO KK [JP]
- [X] EP 2332671 A1 20110615 - BENTELER AUTOMOBILTECHNIK GMBH [DE]
- [X] EP 2286941 A1 20110223 - BENTELER AUTOMOBILTECHNIK GMBH [DE]
- [A] WO 2009006939 A1 20090115 - BHARAT FORGE ALUMINIUMTECHNIK [DE], et al
- [I] BOUVIER V ET AL: "Le procédé COBAPRESS: un procédé d'une expérience de vingt cinq ans, qui a de beaux jours devant /// The COBAPRESS process: a process rich of a twenty-five years experience, with a bright future", HOMMES ET FONDERIE,, vol. 378, October 2007 (2007-10-01), pages 10 - 16, XP009139338

Designated contracting state (EPC)

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