

Title (en)

Method for casting a monoblock cylinder block and pressure casting machine for using the method

Title (de)

Verfahren zum Giessen von Monoblock-Zylinderkurbelgehäusen und Druckgiessanlage zur Durchführung des Verfahrens

Title (fr)

Procédé de coulée d'un bloc-cylindres et machine de coulée sous pression pour l'exécution de ce procédé

Publication

EP 1716942 A3 20061220 (DE)

Application

EP 06005465 A 20060317

Priority

DE 102005018200 A 20050419

Abstract (en)

[origin: EP1716942A2] Method for casting a mono-block cylinder crankcase made from super-eutectic aluminum-silicon alloy containing more than 85 % silicon primary crystals of size of not more than 20 μ m in the support layer of the cylinder walls comprises preparing an alloying melt in a heated dosing oven (1) at a casting temperature of 720-750[deg] C, pouring the melt into a casting machine (3) via a spout (2), pressure casting the melt in a mold (5) with liquid-cooled cylinder cores and quenching the melt to produce a silicon-deficient quenching layer having a thickness of 1 mm and finely forming and distributing the silicon primary crystals behind the quenching layer with 85 % having a grain size of not more than 20 μ m. An independent claim is also included for a pressure casting installation for producing the mono-block cylinder crankcase.

IPC 8 full level

B22D 15/02 (2006.01)

CPC (source: EP)

B22D 15/02 (2013.01); **B22D 17/2218** (2013.01); **B22D 21/007** (2013.01)

Citation (search report)

- [X] US 5165464 A 19921124 - DONAHUE RAYMOND J [US], et al
- [X] GB 912959 A 19621212 - SCHMIDT GMBH KARL
- [E] DE 102004057325 A1 20060601 - PFEIFFER VACUUM GMBH [DE]

Cited by

WO2009043549A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK YU

DOCDB simple family (publication)

EP 1716942 A2 20061102; EP 1716942 A3 20061220; DE 102005018200 A1 20061102

DOCDB simple family (application)

EP 06005465 A 20060317; DE 102005018200 A 20050419