

Title (en)

Method and device for casting light metal crankcases in sand moulds

Title (de)

Verfahren und Anlage zum Giessen von Leichtmetall-Zylinderkurbelgehäusen in Sandformen

Title (fr)

Procédé et dispositif de fabrication des carters de vilebequins cylindriques en métal léger das les moules en sable

Publication

EP 1779943 B1 20080507 (DE)

Application

EP 06018816 A 20060908

Priority

DE 102005051561 A 20051026

Abstract (en)

[origin: EP1779943A1] The use of cooled metal rod(s) is claimed as core for the production of the cylinder cavity in a cylinder crankcase, cast from a light metal alloy in a sand mold and having at least one cylinder, for producing a very low porosity cylinder bearing surface suitable for application of an abrasion-resistant coating. Independent claims are included for: (1) a plant for casting a cylinder crankcase of light metal alloy in a sand mold formed as a core package (6) with: a casting plate (7), on which the core packet is positioned using cams (10); a receiving frame lowerable by a cylinder (1) and positioned using centering pieces (11, 12) and casting plate height adjusters (16, 17); and cooled metal rod(s) (5), positioned on the receiving frame in a guide (4) and insertable into opening(s) in the sand mold, as core for producing the cylinder cavity; (2) a corresponding cylinder crankcase production method, including the insertion of the metal rod(s) as core for producing the cylinder cavity, where the rods cause targeted, intensive abstraction of heat from the melt, directed pore-free solidification in the cylinder bearing surface region and good penetration through the whole wall thickness.

IPC 8 full level

B22C 9/02 (2006.01); **B22C 9/10** (2006.01); **B22D 15/02** (2006.01); **B22D 15/04** (2006.01); **B22D 21/00** (2006.01)

CPC (source: EP)

B22C 9/02 (2013.01); **B22C 9/101** (2013.01); **B22D 15/02** (2013.01); **B22D 15/04** (2013.01); **B22D 18/04** (2013.01); **B22D 21/007** (2013.01)

Cited by

DE102011056985A1; EP2606995A2

Designated contracting state (EPC)

AT DE FR HU PL

DOCDB simple family (publication)

EP 1779943 A1 20070502; **EP 1779943 B1 20080507**; AT E394186 T1 20080515; DE 102005051561 B3 20070111; DE 502006000745 D1 20080619; PL 1779943 T3 20081031

DOCDB simple family (application)

EP 06018816 A 20060908; AT 06018816 T 20060908; DE 102005051561 A 20051026; DE 502006000745 T 20060908; PL 06018816 T 20060908