Title (en)

Casting mould and a casting process for the production of an engine block

Title (de)

Giessform und Giessverfahren zur Herstellung eines Motorblocks

Title (fr)

Moule de coulée et procédé de coulée pour la fabrication d'un bloc moteur

Publication

EP 0974414 A1 20000126 (DE)

Application

EP 99113976 A 19990717

Priority

- DE 19832718 A 19980721
- DE 19925512 A 19990602

Abstract (en)

The engine block has structured cooling channels in the walls between the cylinders with a reduced cross section where the channel axis intersects the cylinder axes. The cast engine block has a cooling channel in the intermediate cylinder wall with a minimum cast wall thickness of less than or equal to 5 mm. The cooling channel is wholly defined by a skin of the cast material. The cross section surface of the cooling channel is reduced from its end to a cross section surface of the cooling channel axis (14) where it intersects the cylinder axis. The minimum width of the cooling channel at the cross section surface axis at the intersection with the cylinder axis is 0.5-1.5 mm. The mold has channel molding cores (8) at the ends of the cores (2,3) to give the cylinder openings.

Abstract (de)

Bei einem Motorblock mit eng beieinander angeordneten Zylinderausnehmungen wird in einer Zylinderzwischenwand ein Kühlkanal durch Umgießen eines Formkern erzeugt, wobei für den Gießformkern vorzugsweise ein in einer Flüssigkeit lösbares, brennbares oder/und sprödes Material verwendet wird, so daß der Gießformkern nach dem Erstarren des Gußstücks leicht aus dem Kanal entfernt werden kann. Der Kanalformkern wird in der Gießform lediglich an seinen Enden gehalten, so daß ein Kühlkanal gebildet wird, der ausschließlich durch eine Gußmaterialhaut begrenzt ist. <IMAGE>

IPC 1-7

B22D 15/02

IPC 8 full level

B22C 9/10 (2006.01); **B22D 15/02** (2006.01); **B22D 19/00** (2006.01); **F02F 1/14** (2006.01); **F02F 7/00** (2006.01)

CPC (source: EP)

B22C 9/10 (2013.01); **B22C 9/105** (2013.01); **B22D 19/0009** (2013.01); **F02F 1/14** (2013.01); **F02F 7/0007** (2013.01); F05C 2201/021 (2013.01); F05C 2251/042 (2013.01)

Citation (search report)

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DOCDB simple family (publication)

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