

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 B1 20050406 (DE)**

Application  
**EP 99113976 A 19990717**

Priority  
• DE 19832718 A 19980721  
• DE 19925512 A 19990602

Abstract (en)  
[origin: EP0974414A1] 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.

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

Cited by  
DE102007009776A1; DE102014109598A1; EP2727668A1; DE102012110592A1; DE102013101942B3; DE10112135A1; FR3075676A1; DE10153721A1; DE10153721B4; DE10153721C5; DE102017213542A1; GB2352418A; US11420251B2; DE102012101893A1; DE102012101893B4; EP2636468A3; DE102012101893C5; DE102017206716A1; US10550753B2; WO2016005806A1; US10850321B2; EP2636468B1

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