

Title (en)  
Cooling system

Title (de)  
Kühlsystem

Title (fr)  
Système de refroidissement

Publication  
**EP 2322785 A1 20110518 (DE)**

Application  
**EP 10187421 A 20090730**

Priority  

- EP 10187421 A 20090730
- EP 09166865 A 20090730

Abstract (en)

The circuit (2) has a cooling slot arranged in a bridge between two engine cylinders. A water jacket portion (3) is defined in a cylinder block (45). A cooling passage is formed in a cylinder head (44) for fluidly coupling the cooling slot and the water-jacket portion in the cylinder block. The coolant passage is formed as a shallow cavity in a surface of the cylinder head proximate the cylinder block. A cylinder head gasket (46) is arranged between the cylinder block and the cylinder head. An independent claim is also included for a cylinder block comprising two cylinders.

Abstract (de)

Die Erfindung betrifft einen der einen Kühlmittelkreislauf (2) aufweist, der in einen zylinderblockseitigen Kühlmittelbereich (3) und in einen zylinderkopfseitigen Kühlmittelbereich (4) aufgeteilt ist wobei der blockseitige Kühlmittelbereich (3) Stegkühlkanäle (57) aufweist, die in dem Zylinderblocksteg (8) eingebracht sind, wobei die Stegkühlkanäle (57) sich in Richtung zum Zylinderkopf verjüngend ausgeführt sind, so dass an dem Zylinderblocksteg (8) Balkone (50) ausgebildet sind, welche in Richtung zu Schraubenpfießen (51) orientiert sind.

IPC 8 full level

**F02F 7/00** (2006.01); **F01P 3/02** (2006.01); **F02F 1/10** (2006.01); **F02F 1/14** (2006.01); **F01P 7/16** (2006.01)

CPC (source: EP US)

**F01P 3/02** (2013.01 - EP US); **F02F 1/14** (2013.01 - EP US); **F02F 1/40** (2013.01 - EP US); **F01P 7/165** (2013.01 - EP US);  
**F01P 2003/027** (2013.01 - EP US); **F01P 2003/028** (2013.01 - EP US)

Citation (applicant)

- EP 1375857 A1 20040102 - RENAULT SA [FR]
- DE 102005033338 A1 20070125 - DAIMLER CHRYSLER AG [DE]
- EP 0197365 A2 19861015 - HALBERGERHUELTE GMBH [DE]
- EP 1217198 B1 20070905 - PETROLIAM NASIONAL BERHAD [MY]
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Citation (search report)

- [X] EP 1217198 A2 20020626 - PETROLIAM NASIONAL BERHAD [MY]
- [A] EP 0628716 A1 19941214 - TOYOTA MOTOR CO LTD [JP]

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Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

**US 2011023799 A1 20110203; US 8555825 B2 20131015;** CN 201891481 U 20110706; EP 2309114 A1 20110413; EP 2309114 B1 20120912;  
EP 2322785 A1 20110518; EP 2322785 B1 20180919; EP 2325453 A1 20110525; EP 2325453 B1 20120718

DOCDB simple family (application)

**US 84626410 A 20100729;** CN 201020278638 U 20100729; EP 09166865 A 20090730; EP 10187421 A 20090730; EP 10187422 A 20090730