

Title (en)

Cylinder head cooling structure for an internal combustion engine

Title (de)

Zylinderkopf-Kühlstruktur für eine Brennkraftmaschine

Title (fr)

Structure de refroidissement d'une culasse pour un moteur à combustion interne

Publication

EP 1283345 A3 20030813 (EN)

Application

EP 02016561 A 20020724

Priority

JP 2001243150 A 20010810

Abstract (en)

[origin: EP1283345A2] A cooling water path (5) is equipped with an intake side cooling path (6) formed between an intake port wall portion and a cylinder head peripheral wall portion (4), an exhaust side cooling path (8) formed between an exhaust port wall portion and the cylinder head peripheral wall portion (4), and a central cooling path (7) formed between the intake port wall portion and the exhaust port wall portion; there is formed a communication path (34) communicating the central cooling path (7) with at least one of the intake side cooling path (6) and the exhaust side cooling path (8); through the communication path (34), a high flow rate portion and a low flow rate portion are formed in the central cooling path (7), and the proportion of the high flow rate portion in a central portion (37) of the central cooling path is larger than the proportion of the high flow rate portion in the end portions of the central cooling path (7) other than the central portion (37). <IMAGE>

IPC 1-7

F02F 1/38

IPC 8 full level

F02F 1/38 (2006.01); **F01P 3/02** (2006.01); **F02B 75/20** (2006.01); **F02F 1/40** (2006.01); **F02F 1/42** (2006.01); **F02B 75/18** (2006.01)

CPC (source: EP)

F02B 75/20 (2013.01); **F02F 1/40** (2013.01); **F02F 1/4214** (2013.01); **F02B 2075/1816** (2013.01); **F05C 2201/021** (2013.01)

Citation (search report)

- [A] US 5868106 A 19990209 - POROPATIC STJEPAN [DE], et al
- [A] US 6202603 B1 20010320 - ETEMAD SASSAN [SE]
- [A] FR 2682994 A1 19930430 - RENAULT [FR]
- [X] PATENT ABSTRACTS OF JAPAN vol. 1997, no. 12 25 December 1997 (1997-12-25)
- [DA] PATENT ABSTRACTS OF JAPAN vol. 017, no. 423 (M - 1458) 6 August 1993 (1993-08-06)
- [A] PATENT ABSTRACTS OF JAPAN vol. 010, no. 385 (M - 548) 24 December 1986 (1986-12-24)

Cited by

EP2128399A1; DE102004032653B4; AT414023B; DE112004002081B4; EP1698770A1; US8857386B2; US9464560B2; EP1698770B1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

DOCDB simple family (publication)

EP 1283345 A2 20030212; EP 1283345 A3 20030813; JP 2003056343 A 20030226

DOCDB simple family (application)

EP 02016561 A 20020724; JP 2001243150 A 20010810