

Title (en)

Method and device for controlling the coolant flow in an internal combustion engine

Title (de)

Verfahren und Vorrichtung zur Regelung des Kühlmittelvolumens in einer Brennkraftmaschine

Title (fr)

Procédé et dispositif pour commander le débit volumétrique du liquide de refroidissement dans un moteur à combustion interne

Publication

EP 1344913 A3 20050316 (DE)

Application

EP 03100364 A 20030217

Priority

DE 10211060 A 20020313

Abstract (en)

[origin: EP1344913A2] The method involves using a coolant pump (11) with a reversible pumping direction and controlling the pump in a selected engine operating region so that the coolant volume between the coolant inlet (24) and outlet (14) is alternately pumped in and out of the internal combustion engine (10). AN Independent claim is also included for the following: an arrangement for regulating coolant volume in internal combustion engine.

IPC 1-7

F01P 5/10; **F01P 7/16**

IPC 8 full level

F01P 5/10 (2006.01); **F01P 7/16** (2006.01); **F01P 5/12** (2006.01); **F01P 7/08** (2006.01); **F01P 7/14** (2006.01)

CPC (source: EP)

F01P 5/10 (2013.01); **F01P 7/164** (2013.01); **F01P 7/08** (2013.01); **F01P 7/167** (2013.01); **F01P 2005/125** (2013.01); **F01P 2007/146** (2013.01); **F01P 2023/00** (2013.01); **F01P 2025/32** (2013.01); **F01P 2037/02** (2013.01)

Citation (search report)

- [X] DE 19948890 A1 20010419 - REINZ DICHTUNGS GMBH [DE]
- [A] EP 0965737 A2 19991222 - SIEMENS CANADA LTD [CA]
- [A] DE 19925986 A1 20001214 - BOSCH GMBH ROBERT [DE]
- [A] EP 0442489 A1 19910821 - NIPPON DENSO CO [JP]
- [A] US 5950576 A 19990914 - BUSATO MURRAY F [CA], et al

Cited by

ITMI20110827A1

Designated contracting state (EPC)

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

DOCDB simple family (publication)

EP 1344913 A2 20030917; **EP 1344913 A3 20050316**; DE 10211060 A1 20031009; DE 10211060 B4 20050317

DOCDB simple family (application)

EP 03100364 A 20030217; DE 10211060 A 20020313