

Title (en)

CYLINDER HEAD, INTERNAL COMBUSTION ENGINE EQUIPPED WITH SAME, AND CORE FOR MOLDING INTAKE PORT

Title (de)

ZYLINDERKOPF, BRENNKRAFTMASCHINE DAMIT UND KERN ZUM FORMEN EINES ANSAUGKANALS

Title (fr)

CULASSE DE CYLINDRE, MOTEUR À COMBUSTION INTERNE POURVU DE CELLE-CI ET NOYAU POUR MOULAGE D'ORIFICE D'ADMISSION

Publication

**EP 3150299 A4 20180124 (EN)**

Application

**EP 15799236 A 20150225**

Priority

- JP 2014107968 A 20140526
- JP 2015055349 W 20150225

Abstract (en)

[origin: EP3150299A1] [Object] To provide a technique for further improving fuel economy. [Solution] An intake port 24 has a quadrangular port region that is substantially quadrangular in a cross section perpendicular to a longitudinal direction (flowing direction of intake air), and openings of injector attachment holes 26 to branch ports 24b and 24c are nearly entirely provided in upper flat wall portions 122b and 122c in quadrangular port regions of the branch ports 24b and 24c. Thus, the size of a dead volume 92 can be made smaller than when the injector attachment holes are provided in an intake port of circular cross section. Therefore, turbulence of intake air flowing in the intake port 24, particularly in the branch ports 24b and 24c can be suppressed, and mixability of fuel and intake air can be enhanced to improve combustion efficiency. As a result, fuel economy can be improved further.

IPC 8 full level

**B22C 9/24** (2006.01); **F02F 1/24** (2006.01); **F02F 1/42** (2006.01); **F02M 61/14** (2006.01); **F02M 69/00** (2006.01)

CPC (source: EP)

**B22C 9/24** (2013.01); **F02F 1/24** (2013.01); **F02F 1/42** (2013.01); **F02F 1/4235** (2013.01); **F02M 61/14** (2013.01); **F02M 69/00** (2013.01)

Citation (search report)

- [X] JP 2005105946 A 20050421 - MAZDA MOTOR
- [X] JP S58167821 A 19831004 - TOYOTA MOTOR CO LTD
- [X] JP H0814048 A 19960116 - MITSUBISHI MOTORS CORP
- [X] JP 2011149309 A 20110804 - TOYOTA MOTOR CORP
- See references of WO 2015182191A1

Designated contracting state (EPC)

AL 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 RS SE SI SK SM TR

DOCDB simple family (publication)

**EP 3150299 A1 20170405**; **EP 3150299 A4 20180124**; **EP 3150299 B1 20200902**; CN 106457365 A 20170222; CN 106457365 B 20190326; JP 6468608 B2 20190213; JP WO2015182191 A1 20170525; MX 2016014035 A 20170214; WO 2015182191 A1 20151203

DOCDB simple family (application)

**EP 15799236 A 20150225**; CN 201580026398 A 20150225; JP 2015055349 W 20150225; JP 2016523178 A 20150225; MX 2016014035 A 20150225