Title (en)

Liquid cooled cylinder head for a multi-cylinder , multi-valve internal combustion engine

Title (de)

Flüssigkeitsgekühlter Zylinderkopf einer mehrzylindrigen, je Zylinder mehrventiligen Brennkraftmschine

Title (fr)

Culasse refroidie par liquide pour un moteur à combustion interne, à plusieurs cylindres et plusieurs soupapes par cylindre

Publication

EP 0931925 B1 20031105 (DE)

Application

EP 98123345 A 19981208

Priority

DE 19802060 A 19980121

Abstract (en)

[origin: EP0931925A2] The water-cooled motor cylinder head (1), with multiple valves at each cylinder of the internal combustion motor, has at least one longitudinal channel (13) defined by a flat angled section (2') of an outer wall (2) inwards towards the longitudinal center plane of the cylinder head. It is also defined by an adjacent cylinder head base section (3') and a longitudinal wall (14) linking it to the outer wall section (2'). The gas exchange collection channel (9), through the longitudinal wall (14), has passage openings (15,16) above and below the channel (9). The lower passage opening (16) at the cylinder head base side, has a cross section according to the gap from a single coolant feed of the longitudinal channel (13), and is linked to guide ribs (18,18') at a free valve web zone (17) between identical dedicated gas exchange channels (10,10') and oriented at them. The gas exchange channels (10,10') form a coolant passage (19,19') with the gas exchange channels (10,10 ') at their base sides. The upper passage (15) acts as the coolant effect section as a valve guide (20,20') between the gas exchange channels (10,10') and the cover wall (4).

IPC 1-7

F02F 1/40; F02F 1/42

IPC 8 full level

F02F 1/40 (2006.01); **F02F 1/42** (2006.01); F02F 1/24 (2006.01)

CPC (source: EP)

F02F 1/40 (2013.01); **F02F 1/4214** (2013.01); F02F 2001/245 (2013.01); F02F 2001/246 (2013.01); F02F 2001/247 (2013.01)

Cited by

DE10257064A1

Designated contracting state (EPC)

DE ES FR GB IT

DOCDB simple family (publication)

DE 19802060 A1 19990722; DE 59810082 D1 20031211; EP 0931925 A2 19990728; EP 0931925 A3 20000315; EP 0931925 B1 20031105; ES 2210649 T3 20040701

DOCDB simple family (application)

DE 19802060 A 19980121; DE 59810082 T 19981208; EP 98123345 A 19981208; ES 98123345 T 19981208