Title (en)

Flow channel.

Title (de)

Strömungskanal.

Title (fr)

Canal de courant.

Publication

EP 0410132 A1 19910130 (DE)

Application

EP 90111537 A 19900619

Priority

DE 3924544 A 19890725

Abstract (en)

[origin: JPH03130528A] PURPOSE: To enhance intake efficiency by dividing the intake duct of an internal combustion engine into two duct segments as viewed in the direction of flow, and forming the flow cross section of the intake duct so that it has a uniform cross-sectional decrease on the downstream side of a predetermined part and a uniform cross-sectional increase on the upstream side. CONSTITUTION: The intake unit 2 of an internal combustion engine 1 is connected to a cylinder head 3 by a fixed flange 5 and an intake duct 6 extends between the intake unit 2 and the cylinder head 3. In this case, the intake duct 6 is divided into a first duct segment 7 located in the intake unit 2 and a second duct segment 8 located at the cylinder head 3 and a valve 9 is provided at the end of the second duct segment 8. The intake duct 6 is formed to have a specific flow cross section as viewed in the direction of flow (s), the flow cross section being set to have a uniform cross-sectional decrease up to a cross- sectional transition area 17 located relatively just ahead of the stem 10 of the valve 9 and to have a uniform cross-sectional increase thereafter.

Abstract (de)

Ein Strömungskanal, insbesondere ein Ansaugkanal (6) in einer Ansauganlage (2) und einem Zylinderkopf (3) einer Brennkraftmaschine (1) weist ein definiertes Strömungsprofil auf, durch das die Strömungsgeschwindigkeit des Gasstroms kontinuierlich beschleunigt wird, und zwar bis zu einem Querschnittsübergangsbereich (17) des Ansaugkanals (6), der - in Strömungsrichtung (S) gesehen - vor einem Ventilschaft (10) liegt. Danach wird die Strömungsgeschwindigkeit des Gasstroms reduziert, wodurch eine geringere Anströmgeschwindigkeit des Ventils (9) erzielt wird. Dies bewirkt einen optimierten Liefergrad, der die Leistung und den Verbrauch der Brennkraftmaschine (1) günstig beeinflußt.

IPC 1-7

F02M 35/10

IPC 8 full level

F02F 1/42 (2006.01); **F02B 29/02** (2006.01); **F02B 31/02** (2006.01); **F02B 31/08** (2006.01); **F02M 35/10** (2006.01); **F02M 35/104** (2006.01)

CPC (source: EP US)

F02M 35/10072 (2013.01 - EP US); **F02M 35/10098** (2013.01 - EP US); **F02M 35/10118** (2013.01 - EP US); **F02M 35/108** (2013.01 - EP US); **F02M 35/1085** (2013.01 - EP US)

Citation (search report)

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Designated contracting state (EPC)

DE ES FR GB IT SE

DOCDB simple family (publication)

EP 0410132 A1 19910130; **EP 0410132 B1 19931208**; DE 3924544 A1 19910207; DE 3924544 C2 19910801; DE 59003768 D1 19940120; ES 2047203 T3 19940216; JP H03130528 A 19910604; RU 1796039 C 19930215; US 5050566 A 19910924

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EP 90111537 A 19900619; DE 3924544 A 19890725; DE 59003768 T 19900619; ES 90111537 T 19900619; JP 19507990 A 19900725; SU 4830477 A 19900725; US 55489690 A 19900720