

Title (en)

Device for introducing fuel into the combustion chamber of an internal combustion engine.

Title (de)

Vorrichtung zum Einbringen von Kraftstoff in den Brennraum einer Brennkraftmaschine.

Title (fr)

Dispositif pour introduire du combustible dans la chambre de combustion d'un moteur à combustion interne.

Publication

EP 0412075 A1 19910206 (DE)

Application

EP 90890208 A 19900709

Priority

AT 184789 A 19890731

Abstract (en)

[origin: JPH0370867A] PURPOSE: To provide an injection flow in accordance with an operation condition by providing a variable throttle between a valve seat of an injection valve to inject compression gas with fuel and a gas storage chamber, and controlling it in accordance with load and speed parameters of an internal combustion engine. CONSTITUTION: An injection valve 2 to open/close a valve element 13 to a valve seat 3 by an actuation plunger 14 injects compression gas from a combustion chamber stored in a gas storage chamber 5 with liquid fuel supplied by a measuring and adjusting device 12 into a combustion chamber in an internal combustion engine. A variable throttle 9 is provided between the valve seat 3 of the injection valve 2 and the gas storage chamber, and its opening surface is controlled in accordance with load and rotation speed parameters of the internal combustion engine. For example, layered gas supply is performed by a weak injection flow for partial load, and desired homogeneous gas supply is performed at a high injection rate for full load.

Abstract (de)

Zur Steuerung der Einblasegeschwindigkeit einer Vorrichtung zum Einbringen von Kraftstoff in den Brennraum einer Brennkraftmaschine, wobei ein in den Brennraum öffnendes Einblaseventil vorgesehen ist, welches zur Entnahme von verdichtetem Gas aus dem Zylinder und zur Einblasung des Gases und des von einer Zumeßeinrichtung bereitgestellten Kraftstoffes dient, wobei ein Gasspeicher zur Aufnahme des verdichteten Gases vorgesehen ist, wird vorgeschlagen, daß zwischen dem Ventilsitz (3) des Einblaseventiles (2) und dem Gasspeicher (5) eine variable Drosselstelle (9) vorgesehen ist, deren Strömungsquerschnitt in Abhängigkeit von Last- und Drehzahlparametern der Brennkraftmaschine steuerbar ist.

IPC 1-7

F02D 7/02; **F02M 67/04**; **F02M 67/12**

IPC 8 full level

F02D 7/02 (2006.01); **F02M 67/04** (2006.01); **F02M 67/12** (2006.01); **F02B 75/02** (2006.01); **F02D 41/30** (2006.01)

CPC (source: EP US)

F02D 7/02 (2013.01 - EP US); **F02M 67/04** (2013.01 - EP US); **F02M 67/12** (2013.01 - EP US); **F02B 2075/027** (2013.01 - EP US); **F02D 41/3023** (2013.01 - EP US)

Citation (search report)

- [X] DE 299053 C
- [X] BE 409316 A
- [A] DE 903518 C 19540208 - NSU WERKE AG
- [A] DE 833736 C 19520310 - DAIMLER BENZ AG
- [A] US 1898763 A 19330221 - COWARDIN SAMUEL P, et al

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Designated contracting state (EPC)

DE FR GB IT

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EP 0412075 A1 19910206; **EP 0412075 B1 19921223**; AT 408256 B 20011025; AT A184789 A 20010215; DE 59000650 D1 19930204; JP H0370867 A 19910326; JP H0656141 B2 19940727; US 5025769 A 19910625

DOCDB simple family (application)

EP 90890208 A 19900709; AT 184789 A 19890731; DE 59000650 T 19900709; JP 20495390 A 19900731; US 55366090 A 19900718