Title (en)

STROKE-CONTROLLED VALVE AS A FUEL METERING DEVICE OF AN INJECTION SYSTEM FOR INTERNAL COMBUSTION ENGINES

Title (de)

HUBGESTEUERTES VENTIL ALS KRAFTSTOFF-ZUMESSEINRICHTUNG EINES EINSPRITZSYSTEMS FÜR BRENNKRAFTMASCHINEN

Title (fr)

SOUPAPE A LEVEE COMMANDEE UTILISEE COMME DISPOSITIF DE DOSAGE DE CARBURANT D'UN SYSTEME D'INJECTION DE MOTEURS A COMBUSTION INTERNE

Publication

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Application

EP 01998729 A 20011116

Priority

- DE 0104306 W 20011116
- DE 10059424 A 20001130

Abstract (en)

[origin: WO0244548A1] The invention relates to a stroke-controlled valve which is used as a fuel metering device of an injection system for internal combustion engines. Said valve has a valve needle (11) which can be actuated axially against the resistance of a spring (24), which is arranged in a graduated, coaxial recess (13) in a valve body (10) and which interacts with a valve seat (17) which is configured in the recess (13) of the valve body (10), hereby controlling the fuel injection process. The valve also comprises a high-pressure area (18) which is connected to an allocated injection nozzle and which is located in front of the valve seat (17), a low-pressure area (28) which is located behind the valve seat and which opens out into the fuel return passage (30); and a low-pressure compensating piston (22) which coaxially adjoins the valve (16, 17) and which is solidly connected to the valve needle. The invention is characterised in that a first control edge (39 or 42) is configured on the low-pressure compensating piston (22). Said control edge interacts with a second control edge (40 or 43) on the valve body recess (13) in the area of the fuel return passage (45, 30) or (48, 30) in such a way that a throttle cross-section (38, 38a or 46, 44a) that is dependent on the valve stroke (41) is formed between the two control edges (39, 40 or 42, 43).

IPC 1-7 (main, further and additional classification)

F02M 59/46; F02M 41/14; F02M 53/00; F02M 59/36

IPC 8 full level (invention and additional information)

F02M 53/00 (2006.01); **F02M 59/20** (2006.01); **F02M 59/36** (2006.01); **F02M 59/46** (2006.01); **F02M 63/00** (2006.01)

CPC (invention and additional information)

F02M 63/0045 (2013.01); **F02M 59/205** (2013.01); **F02M 59/366** (2013.01); **F02M 59/466** (2013.01); **F02M 63/0007** (2013.01); **F02M 63/0017** (2013.01)

Citation (search report)

See references of WO 0244548A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

EPO simple patent family

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INPADOC legal status

2018-04-30 [PGFP DE] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
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2011-09-30 [PG25 FR] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : FR
- Free text : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES
- Effective date : 20081130

2009-11-30 [PG25 GB] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : GB
- Free text : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES
- Effective date : 20081116

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2009-08-31 [PG25 IT] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : IT
- Free text : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES
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- Free text : GERMAN

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