

Title (en)

Exhaust valve for an internal combustion engine.

Title (de)

Auslassventil für Brennkraftmaschine.

Title (fr)

Soupape d'échappement pour un moteur à combustion interne.

Publication

EP 0024890 A1 19810311 (EN)

Application

EP 80302900 A 19800821

Priority

DK 361279 A 19790829

Abstract (en)

In the stationary and/or the movable valve part (1, 4) of the exhaust valve there is provided an annular chamber (9) formed as a circumferential recess in the surface of the valve part (4) in question facing the other valve part. The annular chamber is located intermediate the seating surfaces (5, 6) of the valve parts and the combustion chamber (10) of the engine cylinder and it communicates with the combustion chamber through a relatively narrow inlet when the valve is closed. During the compression period of the engine cylinder's working cycle the annular chamber is filled by pure and relatively cool air, and if local gaps are present between the seating surfaces, that air acts as a barrier preventing the leakage of substantial amounts of hot and aggressive combustion gases through the gaps during the initial part of the expansion period. This prevents the valve parts from being subjected, adjacent to said gaps, to a high temperature rise and concomitant heavy corrosive attacks which would lead to a rapid enlargement of the gaps. The invention, therefore, prolongs the lifetime of the valve by delaying the moment when a refurbishing of the seating surfaces becomes necessary.

IPC 1-7

F01L 3/02; **F01L 3/20**

IPC 8 full level

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CPC (source: EP)

F01L 3/02 (2013.01); **F01L 3/04** (2013.01); **F01L 3/20** (2013.01); **F01L 3/22** (2013.01)

Citation (search report)

- [AD] US 1873119 A 19320823 - GRISWOLD ROBERT G
- [AD] FR 1481241 A 19670519 - SEMT
- [A] GB 1215972 A 19701216 - SEMT [FR]
- GB 532571 A 19410127 - HERBERT FRANK PERCY PURDAY, et al
- GB 108436 A 19170809 - MCKECHNIE JAMES
- US 1560235 A 19251103 - OTTO HINSCH ALBERT
- US 4106466 A 19780815 - GOLOFF ALEXANDER
- US 3820522 A 19740628 - SCHERENBERG H
- DE 744250 C 19441117 - DAIMLER BENZ AG

Cited by

WO0206640A1; DE3331145A1; CN113557351A; DE3425690A1; DE19754138A1; DE19754138B4; EP2287450A1; NO20140690A1; DE4301632A1; DE4301632C2; DE10034773A1; DE10034773B4; CN100410501C; US11060425B2; US8245682B2; WO2020185337A1; EP3450707B1; EP3450707B2

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