

Title (en)

Fuel injection nozzle valve and system incorporating such valve.

Title (de)

Brennstoffeinspritzventil und ein solches Ventil enthaltendes System.

Title (fr)

Valve d'injection de combustible et système muni d'une telle valve.

Publication

**EP 0030103 A1 19810610 (EN)**

Application

**EP 80304156 A 19801120**

Priority

US 7901091 W 19791130

Abstract (en)

Loss of valve opening pressure (VOP) attributed to wear of contacting portions in fuel injection nozzle valves (22) is limited due to provision of a valve tip (38) having a lower portion (38a) which repetitively engages only a lower portion (40a) of a valve seat (40). Advantageous wear of the engaging portions increases the seating area but reduces the effective differential area for fuel pressure to act against, thus reducing the need for increased pressure to open or unseat the valve (22). Increased clearance results in less wear between a reciprocating valve (36) and a cooperating guide (34) which also contributes to reduced VOP loss during the life of such nozzle valves (22).

IPC 1-7

**F02M 61/18**

IPC 8 full level

**F02M 37/18** (2006.01); **F02M 61/12** (2006.01); **F02M 61/18** (2006.01)

CPC (source: EP)

**F02M 61/12** (2013.01); **F02M 61/18** (2013.01)

Citation (search report)

- CH 402510 A 19651115 - SULZER AG [CH]
- DE 1576582 A1 19700212 - KLOECKNER HUMBOLDT DEUTZ AG
- US 3836080 A 19740917 - BUTTERFIELD D, et al
- US 4106702 A 19780815 - GARDNER JOHN W, et al
- DE 932209 C 19550825 - BOSCH GMBH ROBERT
- DE 2843000 A1 19800424 - BOSCH GMBH ROBERT
- DE 2710217 A1 19780914 - BOSCH GMBH ROBERT
- DE 928499 C 19550602 - PAPST HERMANN
- US 3777984 A 19731211 - GREATHOUSE J
- US 2747555 A 19560529 - ALFRED BRUNNER
- DE 2347100 A1 19750327 - KLOECKNER HUMBOLDT DEUTZ AG

Cited by

GB2118624A; FR2510197A1

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**EP 80304156 A 19801120**; BR 7909045 A 19791130; CA 355609 A 19800707; JP 50094379 A 19791130; US 7901091 W 19791130