

Title (en)

METHOD AND DEVICE FOR CONTROLLING AN INJECTOR

Title (de)

VERFAHREN UND VORRICHTUNG ZUM STEUERN EINES INJEKTORS

Title (fr)

PROCEDE ET DISPOSITIF DE COMMANDE D'UN INJECTEUR

Publication

EP 1836386 A1 20070926 (DE)

Application

EP 05813421 A 20051202

Priority

- EP 2005056442 W 20051202
- DE 102005001498 A 20050112

Abstract (en)

[origin: WO2006074842A1] Disclosed is an injector (7, 9, 11, 13) comprising a valve pin (57) whose position is adjustable in accordance with the pressure prevailing in a control chamber (55) and which blocks a fluid flow through at least one injection port (61) in a closed position while otherwise unblocking said fluid flow. The injector further comprises a control chamber (55) that is hydraulically coupled to a high-pressure fluid reservoir (31), a piezo actuator (75), and a control valve (43) which hydraulically disconnects the control chamber (55) from a low-pressure chamber (49) in the closed position thereof while hydraulically coupling the control chamber (55) to the low-pressure chamber (49) outside the closed position, the piezo actuator acting upon said control valve (43). A combination of a triggering period (T_{CTRL}) for the piezo actuator (75) and electric power (E) that is to be fed to the piezo actuator (75) is varied from a predefined initial combination to a target combination in which a pressure curve (P_V) is detected that is characteristic of a movement of the control valve (43) out of the closed position thereof without fluid being proportioned through the injection port (61).

IPC 8 full level

F02M 59/46 (2006.01); **F02D 41/20** (2006.01); **F02M 65/00** (2006.01)

CPC (source: EP US)

F02D 41/2096 (2013.01 - EP US); **F02M 47/027** (2013.01 - EP US); **F02M 63/0225** (2013.01 - EP US); **F02D 41/22** (2013.01 - EP US);
F02D 41/247 (2013.01 - EP US); **F02D 2041/223** (2013.01 - EP US); **F02M 63/0026** (2013.01 - EP US)

Citation (search report)

See references of WO 2006074842A1

Designated contracting state (EPC)

DE FR

DOCDB simple family (publication)

DE 102005001498 A1 20060720; DE 102005001498 B4 20070208; CN 101099039 A 20080102; CN 101099039 B 20100512;
DE 502005004321 D1 20080710; EP 1836386 A1 20070926; EP 1836386 B1 20080528; US 2007250248 A1 20071025;
US 7406952 B2 20080805; WO 2006074842 A1 20060720

DOCDB simple family (application)

DE 102005001498 A 20050112; CN 200580046473 A 20051202; DE 502005004321 T 20051202; EP 05813421 A 20051202;
EP 2005056442 W 20051202; US 72223805 A 20051202