

Title (en)

INJECTION VALVE FOR THE INJECTION OF FUEL IN AN INTERNAL COMBUSTION ENGINE AND METHOD FOR CONTROL OF THE OPENING AND CLOSING PROCESS OF A NOZZLE NEEDLE IN AN INJECTION VALVE

Title (de)

EINSPIRZVENTIL FÜR DIE EINSPIRZUNG VON KRAFTSTOFF IN EINE VERBRENNUNGSKRAFTMASCHINE SOWIE VERFAHREN ZUR STEUERUNG DES ÖFFNUNGS- UND SCHLIESSVORGANGS EINER DÜSENNADEL EINES EINSPIRZVENTILS

Title (fr)

SOUPAPE D'INJECTION POUR L'INJECTION DE CARBURANT DANS UN MOTEUR A COMBUSTION INTERNE ET PROCEDE POUR COMMANDER L'OUVERTURE ET LA FERMETURE D'UNE AIGUILLE D'UNE SOUPAPE D'INJECTION

Publication

**EP 1313945 B1 20041027 (DE)**

Application

**EP 01971616 A 20010816**

Priority

- DE 0103122 W 20010816
- DE 10042231 A 20000828

Abstract (en)

[origin: WO0218779A1] The invention relates to a method for controlling the opening and closing process of a nozzle needle (7) of an injection valve, comprising a control valve (3). According to the invention, a rapid operation of the nozzle needle (7) with concomitant low leakage may be achieved, whereby a pressure in the control chamber (7) is generated which acts upon the nozzle needle (7) in addition to the pre-tensioning of the spring (10) to close the nozzle needle (7) and that for opening the nozzle needle (7), the additional pressure acting on the nozzle needle (7) is released.

IPC 1-7

**F02M 63/00; F02M 61/20; F02M 47/02**

IPC 8 full level

**F02M 47/02** (2006.01); **F02M 61/20** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP)

**F02M 47/02** (2013.01); **F02M 61/205** (2013.01); **F02M 63/0003** (2013.01)

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

**WO 0218779 A1 20020307**; DE 10042231 A1 20020314; DE 10042231 B4 20040930; DE 50104321 D1 20041202; EP 1313945 A1 20030528; EP 1313945 B1 20041027

DOCDB simple family (application)

**DE 0103122 W 20010816**; DE 10042231 A 20000828; DE 50104321 T 20010816; EP 01971616 A 20010816