

Title (en)

METHOD FOR CONTROLLING A VALVE AND METHOD FOR CONTROLLING A PUMP/NOZZLE DEVICE WITH A VALVE

Title (de)

VERFAHREN ZUM STEUERN EINES VENTILS UND VERFAHREN ZUM STEUERN EINER PUMPE-D SE-VORRICHTUNG MIT EINEM VENTIL

Title (fr)

PROCEDE DE COMMANDE D'UNE SOUPAPE ET PROCEDE DE COMMANDE D'UN DISPOSITIF POMPE-AJUTAGE AVEC UNE SOUPAPE

Publication

EP 1704315 B1 20090819 (DE)

Application

EP 04803890 A 20041215

Priority

- EP 2004014270 W 20041215
- DE 10360019 A 20031219

Abstract (en)

[origin: WO2005061876A1] A valve has a valve actuating device, which is provided in the form of a piezo actuator, a valve element, a valve body and a valve seat. At a predeterminable point in time (t5), the valve element is controlled by a discharging process of the piezo actuator from a position in which it rests against the valve seat to a predetermined position located at a distance from the valve seat. The discharging process is divided into a first discharging period (T4) during which a predetermined first amount of electrical energy is discharged from the piezo actuator, a subsequent holding time period (T5) during which the piezo actuator is not controlled, and a subsequent second discharging period (T6) during which a predetermined second amount of electrical energy is discharged from the piezo actuator. The holding time duration (T5) and/or the first discharging period (T4) are/is adapted according to the course of a value that is not characteristic of the oscillation behavior of the piezo actuator during the holding time period (T5). The invention also relates to a corresponding method for a charging process of the piezo actuator.

IPC 8 full level

F02D 41/20 (2006.01); **F02D 35/02** (2006.01)

CPC (source: EP US)

F02D 41/2096 (2013.01 - EP US)

Cited by

DE102016213522A1; DE102016213522B4

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

WO 2005061876 A1 20050707; CN 101094979 A 20071226; CN 101094979 B 20100512; DE 10360019 A1 20050714; DE 502004009939 D1 20091001; EP 1704315 A1 20060927; EP 1704315 B1 20090819; US 2007240685 A1 20071018; US 7802561 B2 20100928

DOCDB simple family (application)

EP 2004014270 W 20041215; CN 200480041679 A 20041215; DE 10360019 A 20031219; DE 502004009939 T 20041215; EP 04803890 A 20041215; US 59648004 A 20041215