

Title (en)

Needle valve for an electromagnetically controlled valve

Title (de)

Ventilnadel für ein elektromagnetisch betätigbares Ventil

Title (fr)

Pointeau pour une soupape à commande électromagnétique

Publication

EP 0685643 B1 20010912 (DE)

Application

EP 95105247 A 19950407

Priority

DE 4415850 A 19940505

Abstract (en)

[origin: JPH07301357A] PURPOSE: To facilitate manufacture of a valve needle to use a metal injection molding method and to make it advantageous in cost. CONSTITUTION: A valve needle section 38 connecting a movable element section 36 and a valve closing element section to each other is manufactured internally solid. At least two grooves in the axial direction are provided in the movable element section 36 so as to secure a flow of fuel to a valve seat. The grooves in the axial direction in the movable element section are constituted so that outflow fuel smoothly flows to the valve seat along an outer periphery of the valve needle section.

IPC 1-7

F02M 51/06

IPC 8 full level

F16K 31/06 (2006.01); **F02M 51/06** (2006.01)

CPC (source: EP US)

F02M 51/0671 (2013.01 - EP US); **F02M 61/168** (2013.01 - EP US); **F02M 2200/8046** (2013.01 - EP US); **Y10S 239/90** (2013.01 - EP)

Cited by

EP2077389A4; CN103733279A; US8505835B2; WO2019137679A1; US9309847B2

Designated contracting state (EPC)

DE ES FR GB IT SE

DOCDB simple family (publication)

DE 4415850 A1 19951109; DE 59509585 D1 20011018; EP 0685643 A2 19951206; EP 0685643 A3 19970502; EP 0685643 B1 20010912; ES 2164115 T3 20020216; JP H07301357 A 19951114; US 5632467 A 19970527

DOCDB simple family (application)

DE 4415850 A 19940505; DE 59509585 T 19950407; EP 95105247 A 19950407; ES 95105247 T 19950407; JP 10252095 A 19950426; US 43606695 A 19950505