

Title (en)

FUEL INJECTION NOZZLE WITH ADDITIVE INJECTION FOR DIESEL ENGINES

Title (de)

KRAFTSTOFF-EINSPRITZDÜSE MIT ADDITIVEINSPRITZUNG FÜR DIESELMOTOREN

Title (fr)

GICLEUR D'ALIMENTATION EN CARBURANT AVEC INJECTION D'ADDITIF POUR MOTEURS DIESEL

Publication

EP 0612374 B1 19980107 (DE)

Application

EP 93918898 A 19930820

Priority

- DE 4230641 A 19920912
- DE 9300755 W 19930820

Abstract (en)

[origin: DE4230641A1] A fuel injection nozzle for internal combustion engines is designed to inject an amount of additive between a preliminary amount and a main amount of injected fuel, so as to favourably influence the smoothness of operation and the course of the combustion. In order to ensure a reproducible separation of the amount of additive from both the preliminary and main amounts of fuel injected, the injection nozzle is provided with an intermediate chamber (26) for the liquid additive arranged in a nozzle body (1) between a pressure chamber (21) and a prechamber (25) for the main fuel. Throttling slots (28, 31) separate the intermediate chamber (26) from the prechamber (25) and from the pressure chamber (21) in the closing position of the valve needle (1), in which an amount of additive is fed into the intermediate chamber, displacing the main fuel into the pressure chamber (21). The additive is fed into the intermediate chamber (26) through an axial supply channel (36) and through radial bores (35) arranged in the nozzle needle (11).

IPC 1-7

F02M 43/04

IPC 8 full level

F02M 25/022 (2006.01); **F02M 43/04** (2006.01); **F02B 3/06** (2006.01)

CPC (source: EP US)

F02M 25/00 (2013.01 - EP US); **F02M 43/04** (2013.01 - EP US); **F02B 3/06** (2013.01 - EP US)

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

DE 4230641 A1 19940317; DE 59307944 D1 19980212; EP 0612374 A1 19940831; EP 0612374 B1 19980107; JP 3536078 B2 20040607; JP H07501376 A 19950209; US 5438966 A 19950808; WO 9407020 A1 19940331

DOCDB simple family (application)

DE 4230641 A 19920912; DE 59307944 T 19930820; DE 9300755 W 19930820; EP 93918898 A 19930820; JP 50764794 A 19930820; US 24072594 A 19940819