

Title (en)
INJECTION NOZZLE FOR FUELS

Title (de)
EINSPRITZDÜSE FÜR KRAFTSTOFFE

Title (fr)
INJECTEUR POUR CARBURANTS

Publication
EP 3234344 B1 20190612 (DE)

Application
EP 15785135 A 20151027

Priority
• DE 102014226407 A 20141218
• EP 2015074892 W 20151027

Abstract (en)
[origin: WO2016096217A1] The invention relates to an injection nozzle (1) for fuels, comprising a nozzle body (2), in which a pressure chamber (4) that can be filled with fuel under high pressure is formed, in which pressure chamber a piston-shaped nozzle needle (3) is arranged in such a way that the nozzle needle can be moved longitudinally. A sealing surface (6) is formed at one end of the nozzle needle (3) and an end face (9) is formed at the opposite end, wherein the sealing surface (6) interacts with a nozzle seat (5) in order to open and close at least one injection opening (8). A control chamber (10) that can be filled with fuel under changing pressure is bounded by the end face (9) of the nozzle needle (3) such that a force can be applied to the end face (9) in the direction of the nozzle seat (5) by means of the hydraulic pressure. The nozzle needle (3) has an elastic longitudinal segment (25), which has a longitudinal stiffness of less than 40,000 N/mm.

IPC 8 full level
F02M 61/04 (2006.01); **F02M 47/02** (2006.01); **F02M 61/10** (2006.01); **F02M 61/12** (2006.01); **F02M 61/20** (2006.01)

CPC (source: CN EP KR US)
F02M 47/02 (2013.01 - US); **F02M 47/027** (2013.01 - CN EP KR US); **F02M 61/042** (2013.01 - CN EP KR US);
F02M 61/10 (2013.01 - US); **F02M 61/12** (2013.01 - CN EP KR US); **F02M 61/166** (2013.01 - US); **F02M 61/205** (2013.01 - CN EP KR US);
F02M 2200/26 (2013.01 - CN EP KR US); **F02M 2200/9053** (2013.01 - CN EP KR US); **F02M 2547/001** (2013.01 - CN EP KR US)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
DE 102014226407 A1 20160623; BR 112017012684 A2 20180102; BR 112017012684 B1 20230328; CN 107110084 A 20170829;
CN 107110084 B 20200110; EP 3234344 A1 20171025; EP 3234344 B1 20190612; JP 2018503765 A 20180208; JP 6453467 B2 20190116;
KR 102354051 B1 20220124; KR 20170095372 A 20170822; US 10508634 B2 20191217; US 2018274508 A1 20180927;
WO 2016096217 A1 20160623

DOCDB simple family (application)
DE 102014226407 A 20141218; BR 112017012684 A 20151027; CN 201580069526 A 20151027; EP 15785135 A 20151027;
EP 2015074892 W 20151027; JP 2017528988 A 20151027; KR 20177019916 A 20151027; US 201515537728 A 20151027