

Title (en)  
A FUEL VALVE AND METHOD FOR INJECTING A LIQUID FUEL INTO A COMBUSTION CHAMBER OF A LARGE COMPRESSION-IGNITING TURBOCHARGED TWO-STROKE INTERNAL COMBUSTION ENGINE FIELD

Title (de)  
KRAFTSTOFFVENTIL ZUM EINSPRITZEN EINES FLÜSSIGEN KRAFTSTOFFS IN EINE BRENNKAMMER EINES GROSSEN KOMPRESSIÖNSZÜNDENDEN TURBOAUFGEFADENEN ZWEITAKTVERBRENNUNGSMOTORELDES

Title (fr)  
SOUPAPE DE CARBURANT ET PROCÉDÉ POUR INJECTER UN CARBURANT LIQUIDE DANS UNE CHAMBRE DE COMBUSTION D'UN GRAND CHAMP DE MOTEUR À COMBUSTION INTERNE À DEUX TEMPS TURBOCOMPRESSÉ À ALLUMAGE PAR COMPRESSION

Publication  
**EP 3330526 B1 20190731 (EN)**

Application  
**EP 17203729 A 20171127**

Priority  
DK PA201670955 A 20161201

Abstract (en)  
[origin: EP3330526A1] A fuel valve (50) for injecting liquid fuel into the combustion chamber of a large slow running two-stroke turbocharged compression-igniting internal combustion engine, comprising an elongated valve housing (52) with a rear end and a front end, a nozzle (54) comprising an elongated nozzle body extending from a base (46) to a closed tip (59), a main bore (55) extending from the base (46) to the closed tip (59) and a plurality of nozzle holes (56) connected to the main bore (55), the nozzle (54) being disposed at the front end of the elongated valve housing (52) with the base (46) connected to the front end, a fuel inlet port (53) in the elongated fuel valve housing (52) for connection to a source (60) of pressurized liquid fuel, an axially displaceable valve needle (61) slidably received in a longitudinal needle bore (64) in the elongated valve housing (52) with a clearance between the valve needle (61) and the needle bore (64), the valve needle (61) having a closed position and an open position, the valve needle (61) rests on a valve seat (69) in the closed position and the valve needle (61) has lift from the valve seat (69) in the open position and the valve needle (61) being biased towards the closed position, the seat (69) being disposed in the elongated valve housing (52) between a fuel chamber (58) in the valve housing (52) and an outlet port (68) in the front end of the elongated valve housing (52), the outlet port (68) connecting directly to the main bore (55) in the nozzle (54), the fuel chamber (58) being connected to the fuel inlet port (53), the clearance opening at one end of the needle bore (64) to the fuel chamber (58), a lubricating oil inlet port (70) for connection to a source of pressurized lubricating oil (57), a lubricating oil supply conduit (47) connecting the lubricating oil inlet port (70) to the clearance at a first position (P1) along the length of the needle bore (64), an ignition liquid inlet port (67) for connection to a source of pressurized ignition liquid (65), and an ignition liquid conduit (66) extending from the ignition liquid inlet port (67) to the chamber (58) or to the clearance at a second position (P2) along the length of the needle bore (64) that is closer to the fuel chamber (58) than the first position (P1).

IPC 8 full level  
**F02B 37/04** (2006.01); **F02B 3/06** (2006.01); **F02B 25/04** (2006.01); **F02M 53/04** (2006.01); **F02M 57/02** (2006.01)

CPC (source: CN EP KR RU)  
**F02B 75/02** (2013.01 - KR); **F02M 53/043** (2013.01 - EP RU); **F02M 57/025** (2013.01 - CN); **F02M 57/026** (2013.01 - EP RU); **F02M 61/10** (2013.01 - CN KR); **F02M 61/18** (2013.01 - KR); **F02M 61/1806** (2013.01 - CN); **F02M 63/0001** (2013.01 - KR); **F02M 67/14** (2013.01 - KR); **F02B 3/06** (2013.01 - EP); **F02B 25/04** (2013.01 - EP); **F02B 37/04** (2013.01 - EP); **F02B 2075/025** (2013.01 - KR); **F02M 2200/16** (2013.01 - EP KR); **F02M 2700/077** (2013.01 - KR)

Cited by  
GB2618283A; US11384721B1; US11815054B2; WO2022169595A1

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)  
**EP 3330526 A1 20180606**; **EP 3330526 B1 20190731**; CN 108131229 A 20180608; CN 108131229 B 20190906; DK 179213 B1 20180205; DK 179213 B9 20180416; DK 201670955 A1 20180205; DK 201670955 A9 20180416; JP 2018091334 A 20180614; JP 6472503 B2 20190220; KR 101921490 B1 20190213; KR 20180062943 A 20180611; RU 2674868 C1 20181213

DOCDB simple family (application)  
**EP 17203729 A 20171127**; CN 201711221989 A 20171129; DK PA201670955 A 20161201; JP 2017231809 A 20171201; KR 20170157009 A 20171123; RU 2017141730 A 20171130