

Title (en)

DUCTED FUEL INJECTION WITH IGNITION ASSIST

Title (de)

KANALISIERTE KRAFTSTOFFEINSPRITZUNG MIT ZÜNDUNGSASSISTENT

Title (fr)

INJECTION DE CARBURANT CANALISÉE AVEC ASSISTANCE À L'ALLUMAGE

Publication

**EP 3433485 A4 20191120 (EN)**

Application

**EP 17770736 A 20170112**

Priority

- US 201662311753 P 20160322
- US 201615364002 A 20161129
- US 2017013187 W 20170112

Abstract (en)

[origin: WO2017164964A1] Various technologies presented herein relate to enhancing mixing inside a combustion chamber to form one or more locally premixed mixtures comprising fuel and charge-gas to enable minimal, or no, generation of soot and/or other undesired emissions during ignition and subsequent combustion of the locally premixed mixtures. To enable sufficient mixing of the fuel and charge-gas, a jet of fuel can be directed to pass through a bore of a duct causing charge-gas to be drawn into the bore creating turbulence to mix the fuel and the drawn charge-gas. The duct can be located proximate to an opening in a tip of a fuel injector. An ignition assist component can be located downstream of the duct to facilitate ignition of the fuel/charge-gas mixture.

IPC 8 full level

**F02P 23/00** (2006.01); **F02B 19/18** (2006.01); **F02B 23/06** (2006.01); **F02B 23/10** (2006.01); **F02M 57/06** (2006.01); **F02P 23/02** (2006.01); **F02P 23/04** (2006.01)

CPC (source: EP KR)

**F02B 23/0651** (2013.01 - EP); **F02B 23/0657** (2013.01 - EP); **F02B 23/101** (2013.01 - EP); **F02M 57/06** (2013.01 - EP); **F02M 61/166** (2013.01 - EP); **F02M 61/1806** (2013.01 - EP); **F02P 15/006** (2013.01 - EP); **F02P 23/02** (2013.01 - KR); **F02P 23/04** (2013.01 - EP KR); **F02B 19/18** (2013.01 - EP); **F02M 2200/90** (2013.01 - EP); **F02P 13/00** (2013.01 - EP); **Y02T 10/12** (2013.01 - EP)

Citation (search report)

- [X] US 4345555 A 19820824 - OSHIMA YUJIRO, et al
- [X] EP 0809003 A2 19971126 - ISUZU CERAMICS RES INST [JP]
- [X] US 5695328 A 19971209 - DEFREITAS DENNIS MICHAEL [US], et al
- [X] US 3926169 A 19751216 - LESHNER ERVIN, et al
- [X] JP H04109070 A 19920410 - SHINNENSHIYOU SHISUTEMU KENKIY
- [X] US 4245589 A 19810120 - RYAN JOSEPH C
- [X] US 2497374 A 19500214 - ANTOINE ROUY AUGUSTE LOUIS MAR
- [X] DE 102013017930 A1 20150521 - UFERMANN RÜDIGER [DE]
- [E] WO 2017123755 A1 20170720 - SANDIA CORP [US]
- See references of WO 2017164964A1

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)

**WO 2017164964 A1 20170928**; CN 108700016 A 20181023; EP 3433485 A1 20190130; EP 3433485 A4 20191120; JP 2019510157 A 20190411; KR 20180132615 A 20181212

DOCDB simple family (application)

**US 2017013187 W 20170112**; CN 201780012522 A 20170112; EP 17770736 A 20170112; JP 2018543233 A 20170112; KR 20187024513 A 20170112