

Title (en)  
DUCTED FUEL INJECTION

Title (de)  
KANALISIERTES KRAFTSTOFFEINSPRITZUNG

Title (fr)  
INJECTION DE CARBURANT CANALISÉE

Publication  
**EP 3402980 A4 20190619 (EN)**

Application  
**EP 17738928 A 20170112**

Priority  

- US 201662278184 P 20160113
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- US 2017013186 W 20170112

Abstract (en)  
[origin: WO2017123755A1] 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. The various technologies presented herein can be utilized in a number of combustion systems, such as compression-ignition (CI) reciprocating engines, spark- ignition (SI) reciprocating engines, gas-turbine (GT) engines, burners and boilers, wellhead/refinery flaring, etc.

IPC 8 full level  
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CPC (source: EP KR)  
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Citation (search report)  

- [XI] EP 0305531 A1 19890308 - HI TECH INTERNATIONAL LAB COMP [JP]
- [XI] JP H04109070 A 19920410 - SHINNENSHIYOU SHISUTEMU KENKIY
- [XI] JP S59120715 A 19840712 - HINO MOTORS LTD
- [XI] US 2004195397 A1 20041007 - UPATNIEKS ANSIS [US]
- [XI] US 2497374 A 19500214 - ANTOINE ROUY AUGUSTE LOUIS MAR
- [X] US 2004211389 A1 20041028 - DELISLE GILLES L [US]
- [X] US 2010170265 A1 20100708 - WHALING KENNETH NEIL [US], et al
- [XI] US 5388985 A 19950214 - MUSIL JOSEPH E [US], et al
- See references of WO 2017123755A1

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

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**US 2017013186 W 20170112**; CN 201780006422 A 20170112; EP 17738928 A 20170112; JP 2018536405 A 20170112; KR 20187020042 A 20170112