

Title (en)

HPDF OPERATING METHOD FOR AN INTERNAL COMBUSTION ENGINE, INTERNAL COMBUSTION ENGINE AND WORK DEVICE

Title (de)

HPDF-BETRIEBSVERFAHREN FÜR EINE BRENNKRAFTMASCHINE, BRENNKRAFTMASCHINE UND ARBEITSVORRICHTUNG

Title (fr)

PROCÉDÉ DE FONCTIONNEMENT HPDF POUR UN MOTEUR À COMBUSTION INTERNE, MOTEUR À COMBUSTION INTERNE ET DISPOSITIF DE TRAVAIL

Publication

EP 3990763 A1 20220504 (DE)

Application

EP 20730242 A 20200602

Priority

- DE 102019209232 A 20190626
- EP 2020065177 W 20200602

Abstract (en)

[origin: WO2020259962A1] The invention relates to an HPDF operating method for an internal combustion engine (100) with internal mixture formation and self-ignition, in which method: (i) for a combustion cycle of an operating cycle, at high pressure, the introduction of a non-self-igniting or petrol fuel as a main fuel (63) into a combustion chamber (20) of the internal combustion engine (1) is at least initiated and/or carried out at a first time point and the introduction of a self-igniting or diesel fuel as an igniting fuel (64) into said combustion chamber is at least initiated and/or carried out at a second time point, (ii) self-ignition of the igniting fuel (64) is brought about and, by means of the self-ignition, spark ignition of the main fuel (63) is brought about, and (iii) the self-ignition of the igniting fuel (64) is carried out temporally and/or spatially in such a way that the main fuel (63) is ignited, in particular temporally first, at a location (1) and/or in a region of a jet tip (63f) and/or of a propagation front (63f) of an amount of introduced main fuel (63).

IPC 8 full level

F02B 23/06 (2006.01); **F02B 23/08** (2006.01); **F02D 19/06** (2006.01); **F02D 19/10** (2006.01); **F02D 41/00** (2006.01)

CPC (source: EP US)

F02B 3/08 (2013.01 - US); **F02B 23/0651** (2013.01 - EP); **F02B 23/0672** (2013.01 - EP); **F02B 23/0678** (2013.01 - EP);
F02B 23/08 (2013.01 - EP); **F02D 19/0689** (2013.01 - EP); **F02D 19/0694** (2013.01 - EP); **F02D 19/10** (2013.01 - EP);
F02D 41/0027 (2013.01 - US); **F02B 23/0687** (2013.01 - EP US); **F02D 19/0689** (2013.01 - US); **F02D 19/10** (2013.01 - US);
F02D 19/105 (2013.01 - EP); **F02D 41/0027** (2013.01 - EP); **Y02T 10/30** (2013.01 - EP)

Citation (search report)

See references of WO 2020259962A1

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

DE 102019209232 A1 20201231; EP 3990763 A1 20220504; US 2022243643 A1 20220804; WO 2020259962 A1 20201230

DOCDB simple family (application)

DE 102019209232 A 20190626; EP 2020065177 W 20200602; EP 20730242 A 20200602; US 202017622104 A 20200602