

Title (en)

AN INTERNAL COMBUSTION ENGINE AND A METHOD FOR OPERATING AN INTERNAL COMBUSTION ENGINE

Title (de)

VERBRENNUNGSMOTOR UND VERFAHREN ZUM BETRIEB EINES VERBRENNUNGSMOTORS

Title (fr)

MOTEUR À COMBUSTION INTERNE ET PROCÉDÉ DE FONCTIONNEMENT D'UN MOTEUR À COMBUSTION INTERNE

Publication

EP 3779152 A1 20210217 (EN)

Application

EP 19191287 A 20190812

Priority

EP 19191287 A 20190812

Abstract (en)

The invention provides an internal combustion engine (100) comprising a crankshaft (110) and at least one combustion chamber (120). The at least one combustion chamber (120) comprises at least one inlet port (121) for a fuel mixture, and at least one exhaust port (122) for exhaust gases. The at least one combustion chamber (120) comprises a first piston (130) coupled to the crankshaft (110) for reciprocating the first piston (130) in the at least one combustion chamber (120) for a first compression of the fuel mixture during a first duration up to a first compression ratio (CR1) below auto-ignition. The at least one combustion chamber (120) comprises a second piston (140) coupled to a drive system (150) for reciprocating the second piston (140) in the at least one combustion chamber (120) for a second compression of the fuel mixture, in addition to the first compression, during a predetermined second duration, shorter than the first duration, at least up to a second compression ratio for auto-ignition.

IPC 8 full level

F02D 15/04 (2006.01); **F02B 75/04** (2006.01); **F02D 41/30** (2006.01)

CPC (source: EP)

F02B 75/042 (2013.01); **F02D 15/04** (2013.01); **F02D 35/023** (2013.01); **F02D 41/3041** (2013.01); **F02B 1/14** (2013.01); **F02D 2700/03** (2013.01)

Citation (applicant)

WO 2007084242 A1 20070726 - PERKINS ENGINES CO LTD [GB], et al

Citation (search report)

- [XY] JP 2014118930 A 20140630 - OKUNO ARITOMI
- [XY] WO 2018081854 A1 20180511 - AUSTRALIAN FROZEN FOODS PTY LTD [AU]
- [XY] US 2002059907 A1 20020523 - THOMAS CHARLES RUSSELL [US]
- [XY] WO 2011063742 A1 20110603 - WANG HONGZE [CN]
- [XY] JP 2014098321 A 20140529 - UNIV NIHON
- [XY] DE 10228303 A1 20030320 - CATERPILLAR INC [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)

EP 3779152 A1 20210217

DOCDB simple family (application)

EP 19191287 A 20190812