Title (en)
METHOD FOR STARTING A COMBUSTION ENGINE

Title (de)
VERFAHREN ZUM STARTEN EINER BRENNKRAFTMASCHINE

Title (fr)
PROCEDE DESTINE AU DEMARRAGE D'UN MOTEUR A COMBUSTION INTERNE

Publication
EP 2993342 A1 20160309 (DE)

Application
EP 15002291 A 20150801

Priority
AT 6762014 A 20140903

Abstract (en)
[origin: CA2902529A1] A. method of starting an internal combustion engine (1) which has a plurality of piston-cylinder units (2) wherein there are dead volumes (3) upstream of the piston-cylinder units (2), wherein upon an attempt at starting the internal combustion engine (1) the pistons are driven in the cylinders by an auxiliary motor (5), and wherein the maximum permissible duration of a starting attempt is restricted by a predetermined starting time (t s) of the internal combustion engine (1), wherein the starting time (t s) is calculated and predetermined prior to or at the beginning of a starting attempt of the internal combustion engine (1) in dependence on a state of the internal combustion engine (1) and/or the auxiliary motor (5).

Abstract (de)
Verfahren zum Starten einer Brennkraftmaschine (1), die eine Vielzahl von Kolben-Zylinder-Einheiten (2) aufweist, wobei stromaufwärts der Kolben-Zylinder-Einheiten (2) Totvolumina (3) vorliegen, wobei bei einem Startversuch der Brennkraftmaschine (1) die Kolben in den Zylindern durch einen Hilfsmotor (5) angetrieben werden, wobei die maximal zulässige Dauer eines Startversuches durch eine vorgegebene Startzeit (t s) der Brennkraftmaschine (1) beschränkt ist, wobei die Startzeit (t s) vor oder zu Beginn eines Startversuches der Brennkraftmaschine (1) in Abhängigkeit eines Zustandes der Brennkraftmaschine (1) und/oder des Hilfsmotors (5) berechnet und vorgegeben wird.

IPC 8 full level
F02N 11/08 (2006.01); F02N 11/10 (2006.01); F02B 75/18 (2006.01)

CPC (source: AT EP US)
F02N 11/08 (2013.01 - US); F02N 11/0803 (2013.01 - AT); F02N 11/0848 (2013.01 - EP US); F02N 11/106 (2013.01 - EP US); F02B 2075/1832 (2013.01 - EP US); F02D 17/02 (2013.01 - EP US); F02D 2200/0411 (2013.01 - EP US); F02N 2200/02 (2013.01 - AT); F02N 2200/022 (2013.01 - EP US); F02N 2200/041 (2013.01 - AT EP US); F02N 2300/102 (2013.01 - AT)

Citation (search report)
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• [X] JP 2008051014 A 20080306 - DENSO CORP
• [Y] DE 10101007 A1 20020822 - VOLKSWAGEN AG [DE]
• [Y] DE 102007025692 A1 20080124 - DAIMLER AG [DE]
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EP3428445A1

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)
EP 2993342 A1 20160309; **EP 2993342 B1 20211013**; AT 516215 A1 20160315; AT 516215 B1 20171115; CA 2902529 A1 20160303; CA 2902529 C 20180116; CN 105386919 A 20160309; CN 105386919 B 20190430; JP 2016053360 A 20160414; JP 6240639 B2 20171129; KR 101818688 B1 20180116; KR 20160028387 A 20160311; US 2016061170 A1 20160303; US 9920730 B2 20180320

DOCDB simple family (application)
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