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(54) Title: METHOD TO ENHANCE LIGHT LOAD HCCI COMBUSTION CONTROL USING MEASUREMENT OF CYLINDER PRESSURES

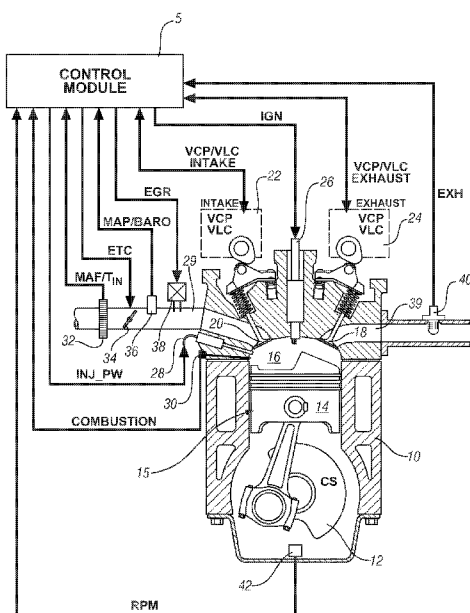


FIG. 1

(57) Abstract: A method for controlling an amount of fuel reforming in an internal combustion engine configured to selectively operate in a homogeneous charge compression- ignition combustion mode with an exhaust re-compression strategy includes monitoring in-cylinder pressures during a current combustion cycle, utilizing the monitored in-cylinder pressures to project reforming required in a next combustion cycle, and controlling the next combustion cycle based on the projected reforming required in the next combustion cycle.



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A. CLASSIFICATION OF SUBJECT MATTER**F02D 35/02(2006.01)i, F02D 41/04(2006.01)i, F02B 17/00(2006.01)i, F02D 45/00(2006.01)i**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC9: F02D 35/02

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models since 1975.

Japanese utility models and applications for utility models since 1975.

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

KOMPASS(KIPO internal); Keywords: HCCI, cylinder pressure, control and fuel reform

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2007/044331 A2 (GM GLOBAL TECHNOLOGY OPERATIONS, INC.) 19 Apr. 2007 See the abstract, claims 1-14 and figs. 1-3.	1 - 17
A	WO 2008/134169 A1 (GM GLOBAL TECHNOLOGY OPERATIONS, INC.) 06 Nov. 2008 See the abstract, claims 1-19 and figs. 1-3.	1 - 17
A	WO 2008/134170 A1 (GM GLOBAL TECHNOLOGY OPERATIONS, INC.) 06 Nov. 2008 See the abstract, claims 1-21 and figs. 1-4.	1 - 17
A	EP 1744037 A1 (FORD GLOBAL TECHNOLOGIES, LLC.) 17 Jan. 2007 See the abstract, claims 1-23 and figs. 1-3.	1 - 17
A	EP 1905989 A2 (DELPHI TECHNOLOGIES, INC.) 02 Apr. 2008 See the abstract, claims 1-34 and figs. 1-10.	1 - 17



Further documents are listed in the continuation of Box C.



See patent family annex.

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Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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WO 2008/134170 A1	06.11.2008	US 2008-0264380 A1	30.10.2008
EP 1744037 A1	17.01.2007	None	
EP 1905989 A2	02.04.2008	US 2008-0082250 A1	03.04.2008