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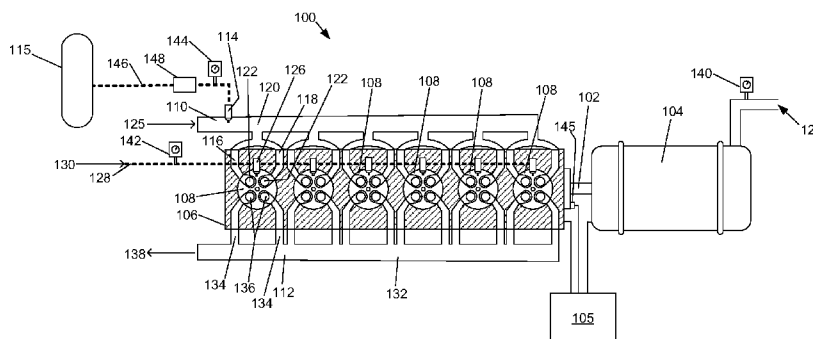


FIG. 1

(57) Abstract: A system having an internal combustion engine connected to a driven device includes primary and secondary fuel supplies. A primary fuel supply sensor is configured to provide a primary fuel supply signal indicative of a rate of supply of a primary fuel to the engine through the primary fuel supply. A secondary fuel supply sensor is configured to provide a secondary fuel supply signal indicative of a rate of supply of a secondary fuel to the engine through the secondary fuel supply. A power output sensor measures a parameter indicative of a power output of the driven device and provides a power output signal. An electronic controller receives the primary and secondary fuel supply signals and the power output signal, and determines a characteristic of the secondary fuel based on the primary and secondary fuel supply signals and the power output signal.

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A. CLASSIFICATION OF SUBJECT MATTER**F02D 19/06(2006.01)i, F02D 19/08(2006.01)i, F02M 37/00(2006.01)i, F02D 29/06(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)

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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

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: fuel supply, signal, diesel, natural gas, power output, determine and characteristic

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 11-166433 A (TOKYO GAS CO LTD) 22 June 1999 See the abstract, paragraphs 0013-0018 and figures 1,2.	1-10
A	JP 08-284704 A (HIRAOKA TOSHIHIKO et al.) 29 October 1996 See the abstract, paragraphs 0010,0011 and figure 2.	1-10
A	US 2009-0199626 A1 (MURPHY GREGORY P. et al.) 13 August 2009 See the abstract, paragraphs 0017 and claim 1 and figure 1.	1-10
A	US 05537978 A (WATANABE; SATORU et al.) 23 July 1996 See the abstract, column 2 lines 53 - column 3 lines 46 and figure 1.	1-10

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 11-166433 A	22.06.1999	None	
JP 08-284704 A	29.10.1996	None	
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