

(S7) Abstract: A system [10] for producing, dispensing, using and monitoring a hydrogen enriched fuel includes a producing system [12] configured to produce the hydrogen enriched fuel, a vehicle [16] having an engine [18] configured to use the hydrogen enriched fuel, and a dispensing system [14] configured to store and dispense the hydrogen enriched fuel into the vehicle [16]. The system [10] also includes a fuel delivery system [20] on the vehicle [16] configured to deliver the hydrogen enriched fuel to the engine [18], and a control system [44] configured to control the producing system [12] and to monitor the use of the hydrogen enriched fuel by the vehicle [16]. A method includes the steps of producing hydrogen gas and a hydrocarbon fuel, blending the hydrogen gas and the hydrocarbon fuel into the hydrogen enriched fuel, using the hydrogen enriched fuel in the engine, and tracking emissions during the producing step and during the using step.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US07/01478

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - F02B 43/08 (2007.10)

USPC - 123/3

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)

IPC(8) - F02B 43/08 (2007.10)

USPC - 62/7, 45.1, 48.1; 123/3, 406.45, 434, 436, 443, 445, 472, 478, 480, 492, 527; 701/1, 99, 101-103

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

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

MicroPatent(US, USPG-PUB, EPO, DERWENT), IP.com, DialogPro, Google Patents

Search Terms: hydrogen, fuel, hydrocarbon, engine, internal, combustion, control, vehicle, automobile, methane, wireless

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,787,864 A (COLLIER, JR. et al) 04 August 1998 (04.08.1998) entire document	26, 27, 29, 31-34
-		
Y		1-25, 28, 30
Y	US 4,608,830 A (PESCHKA et al) 02 September 1986 (02.09.1986) entire document	1-8, 10-21, 23, 24, 28
Y	US 6,745,613 B2 (REND AHL et al) 08 June 2004 (08.06.2004) entire document	9, 25, 30
Y	US 4,559,133 A (SIEGFRIED et al) 17 December 1985 (17.12.1985) entire document	22

☐ Further documents are listed in the continuation of Box C.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

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"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

12 December 2007

Date of mailing of the international search report

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