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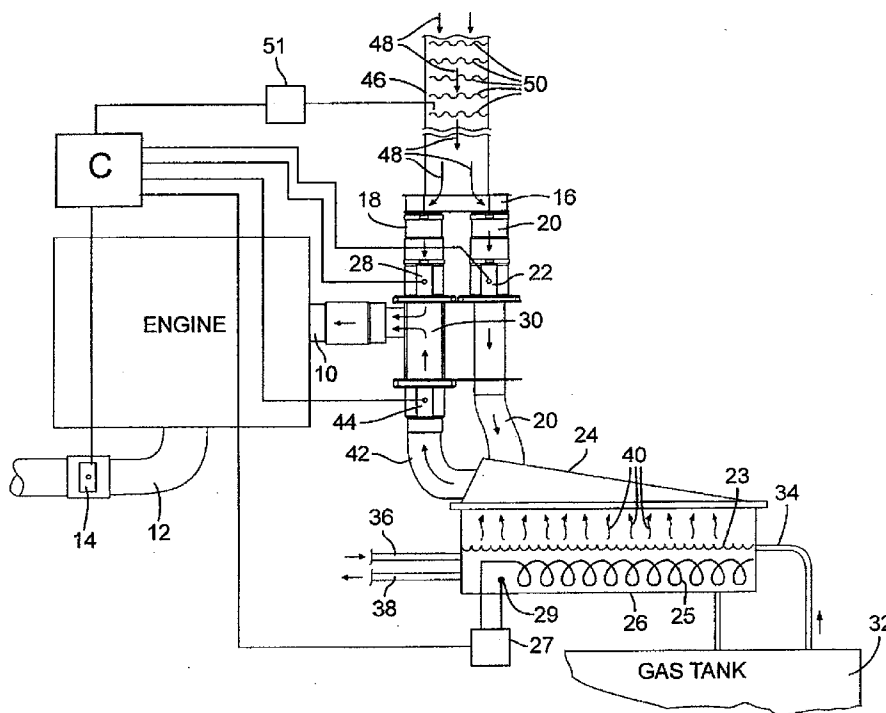
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(54) Title: SYSTEM FOR IMPROVING FUEL UTILIZATION



(57) Abstract: A vapor fuel air mixture supply system for a combustion engine, whereby the mixture of air and fuel is elevated in temperature prior to combustion. The liquid fuel may be vaporized in a fractionation process and further heated to enhance flame speed combustion and improve efficiency. The air to fuel mixture may result in significant improvements in fuel efficiency.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - F02M 1/00 (2008.04)

USPC - 123/179.16

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)

USPC - 123/179.16

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

USPC - 123/179.17, 179.18

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

PubWest(PGPB,USPT,EPAB,JPAB); Google; Search terms: vaporization, gasification, combustion chamber, heater, heat source, heat exchanger, heat supply, fuel, air, air-to-fuel ratio, heating/preheating, fractionation

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X - Y	US 6,820,864 B2 (Amou et al.) 23 November 2004 (23.11.2004); Figs. 1 and 3; col 8, lns 57-59 ; col 10, lns 9-16; col 16, lns 10-12; col 22, ln 63 to col 23, ln 4.	1-3, 6, 8, 9, 12, 21-25, 32 ----- 4, 5, 7, 10, 11, 13-20, 26-31 and 33
Y	US 5,967,113 A (Kaneko et al.) 19 October 1999 (19.10.1999); col 10, lns 8-10 and 26-27; col 14, lns 23-25 .	4, 5, 7, 10 and 33
Y	JP 2006002694 (Tomihisa et al) 01 May 2006 (01.05.2006); abstract; para [0013].	11, 14, 19, 20, and 27-31
Y	US 6,295,973 B1 (Yang) 02 October 2001 (02.10.2001); Figs. 1 and 3; col 2, lns 23-24.	13-20, 26, 30 and 31

 Further documents are listed in the continuation of Box C.

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"&" document member of the same patent family

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