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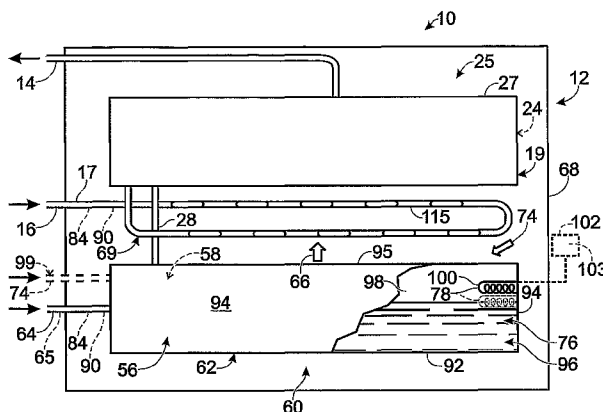
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(54) Title: HYDROGEN-PRODUCING FUEL PROCESSING ASSEMBLIES, HEATING ASSEMBLIES, AND METHODS OF OPERATING THE SAME



(57) Abstract: Combustion-based heating assemblies and hydrogen-producing fuel processing assemblies that include at least a reforming region adapted to be heated by the heating assemblies. The heating assembly may include at least one fuel chamber and at least one heating and ignition source. The at least one fuel chamber may be adapted to receive at least one fuel stream at a first temperature. The fuel stream may include a liquid, combustible, carbon-containing fuel having an ignition temperature greater than the first temperature at which the fuel stream is delivered to the fuel chamber. The at least one heating and ignition source may be adapted to heat at least a portion of the fuel chamber to raise the temperature of at least a portion of the carbon-containing fuel to a second temperature at least as great as the ignition temperature and to ignite the carbon-containing fuel. Methods of use are also disclosed.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - C10J 3/46 (2007.01)

USPC - 48/197R

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 - 48/197R

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

USPC - 48/197R - see keywords below; Google Patent Internet - see keywords below

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

Electronic Databases Searched: fuel processor, heating assembly, fuel chamber, reforming, capillary, absorbent, transport medium, liquid fuel region, fuel vapor region, electrical resistance heating, resistive heater, igniter, reservoir

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 6,890,672 B2 (Dickman et al.) 10 May 2005 (10.05.2005), entire document, especially col 3, col 4, col 6, col 14.	1-8, 12-22 and 24-33 ----- 9-11, 23 and 34
Y	US 4,562,123 A (Shimizu et al.) 31 December 1985 (31.12.1985), col. 7, ln 30-65.	9-11, 23 and 34

 Further documents are listed in the continuation of Box C.

* Special categories of cited documents:	"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
"A" document defining the general state of the art which is not considered to be of particular relevance	"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
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"O" document referring to an oral disclosure, use, exhibition or other means	
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