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Hydrogen airdation injection system.

(57)

System and apparatus for the controlled intermixing of hydrogen/oxygen gasses with non-combustible gasses to reduce the burning temperature and velocity of the hydrogen gas in a burner. The system utilizes a non-electrolysis hydrogen generator for developing the hydrogen/oxygen gasses. The hydrogen gas with non-volatile gasses are intermixed in a controlled air intake chamber. The exhaust gasses of the burner are returned as the non-volatile gasses to the mixing chamber in a closed loop arrangement. Upon attaining the proper burning temperature and velocity of the hydrogen gas the ratio of hydrogen/oxygen and non-volatile gasses is maintained. To effect a practical utilization, the generation of the hydrogen/oxygen gasses are controlled in start-up and in quantity. The control of the generation of gasses is effected by one or more variable parameters; such as varying the voltage applied to the plates, varying the pulse rate of the voltage on the plates, varying the spacing between the plates, switching the number of plates, and plate configuration. The hydrogen/oxygen generation is on demand; that is the hydrogen/oxygen generation on start-up is only on demand and thereafter generation is controlled in quantity by the need much in the same manner as an accelerator.

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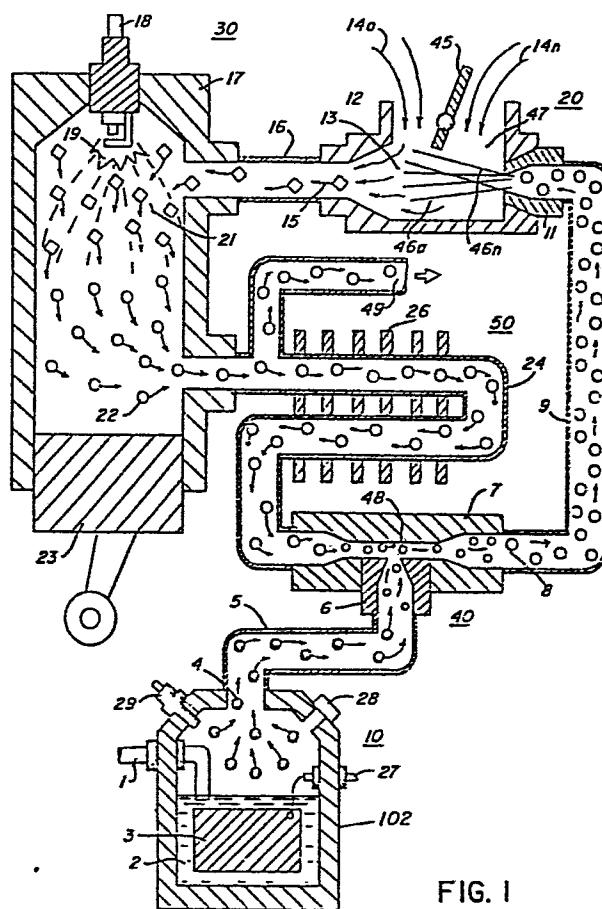


FIG. 1



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EUROPEAN SEARCH REPORT

01 224 72
Application number

EP 84 10 2824

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 3)
E	EP-A-0 111 574 (MEYER) * Whole document *	1-21	F 02 B 43/10 F 02 M 21/06
P,X	--- EP-A-0 086 439 (MEYER) * Whole document *	1,3-5, 7,8,10 ,11,14	
Y	--- US-A-3 616 779 (NEWKIRK) * Column 3, line 37 - column 4, line 7; column 4, lines 48-59; column 5, lines 4-7; figure 1 * & FR-A-2 096 416 (Cat. A, claim 14)	1,3-5, 7-9,12 ,13	
A		14	TECHNICAL FIELDS SEARCHED (Int. Cl. 3)
Y	--- US-A-3 648 668 (PACHECO) * Column 3, lines 39-58; figure 1 *	1,3-5, 7-9,12 ,13	F 02 B 43/00 F 02 M 21/00 F 02 M 25/00 F 02 B 75/12
P,A	--- EP-A-0 101 761 (MEYER) * Page 3, lines 10-24; abstract; figure 1 *	1,3-5, 7-9,14	
A	--- GB-A-1 517 799 (NISSAN) --- -/-		
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 22-04-1985	Examiner NORDSTROEM U.L.N.
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 3)
A	FR-A-1 178 241 (CHARDONNEREAU)		

A	US-A-3 971 847 (HOUSEMAN)		

			TECHNICAL FIELDS SEARCHED (Int. Cl. 3)
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 22-04-1985	Examiner NORDSTROEM U.L.N.
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