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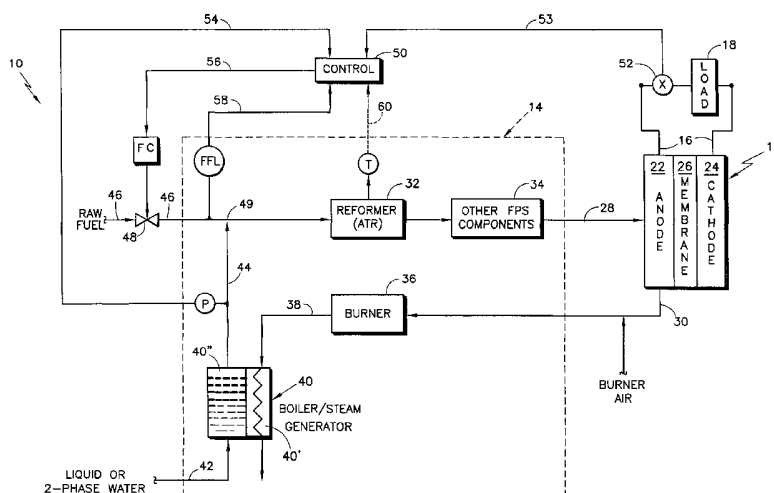
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[Continued on next page]

(54) Title: FUEL CONTROL FOR FUEL-PROCESSOR STEAM GENERATION IN LOW TEMPERATURE FUEL CELL POWER PLANT



(57) Abstract: A control method and arrangement (48, 50, 150, I, T, P, FFL) are provided in a fuel cell power plant (10) for regulating (48, FC) fuel flow to a steam-based fuel processing system (FPS) (14) associated with a low-temperature fuel cell stack assembly (12). A portion of the fuel provided by the FPS (14) is used to provide steam for the FPS. The fuel flow to the FPS is regulated as a function of the power demand (I) on the fuel cell (12) and at least the enthalpy of the steam (P, T), such that the steam enthalpy is regulated to meet increases and decreases in power demand without exceeding steam pressure limits. In addition to reliance on steam pressure (P) as a fundamental measure of steam enthalpy, the control may additionally use reaction temperature (T) at, or in, a reformer, such as a catalytic steam reformer (132), to regulate fuel flow and thus, steam enthalpy.

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International application No.

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**A. CLASSIFICATION OF SUBJECT MATTER**

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**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
 U.S. : 429/13, 19, 22, 23, 24, 25, 38

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)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4,002,805 (WALDMAN et al) 11 January 1977 (11.01.1977), col. 4 line 15-19, line 29-56,	1, 8

Further documents are listed in the continuation of Box C.

See patent family annex.

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

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