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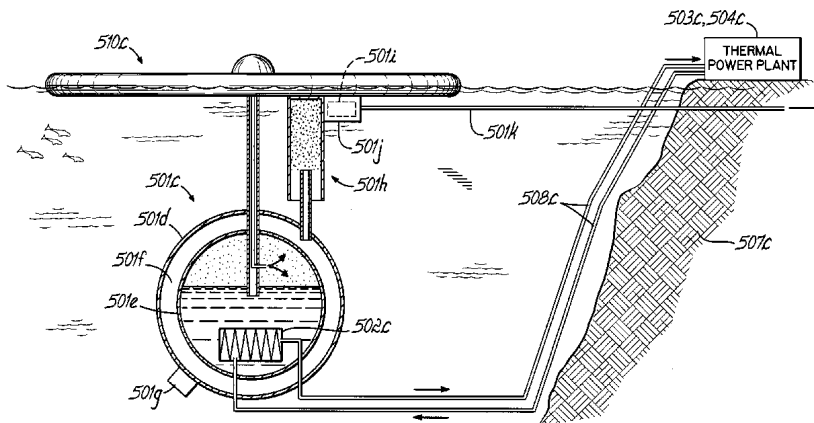


FIG. 19

(57) Abstract: A system [500] for producing solar energy at a desired temperature and pressure range includes a primary energy source [501] that is used in a Clausius Rankine cycle, with the primary energy source connected to and proximate to a plurality of solar collectors [520]. More particularly, at least one steam storage tank [501] feeds the expansion step of the Clausius Rankine cycle. This enables the system [500] to reliably supply energy during times when the solar collectors receive little or no radiation. According to one aspect of the invention, the solar collectors [520] reside on an artificial island [510a, 510b, 510c], preferably sea-based, or offshore, so that the steam storage tank [501a, 501b, 501c] can be located well below sea level. This enables the use of compressive forces from the sea water to counteract the outwardly directed pressure caused by the steam contained in the steam storage tank [501a, 501b, 501c]. Moreover, this storage tank [501c] may have a dual-walled structure [501d, 501e], for insulation purposes, and may be operatively connected to a sea level condenser [501i] to produce sweet water. Still further, steam from the steam storage tank [501] can be used to drive one or more absorption chiller devices housed within an absorption chiller unit [530a] that is operatively connected to an air conditioning system [530b]. And these structures can be located on the roof of a building [530] so as to supply air conditioning to the building [530].



A. CLASSIFICATION OF SUBJECT MATTER

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ADD.

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)

F01K F03G F24J

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 practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 35 41 713 A1 (SAPPOK HEINZ JOACHIM DIPL ING) 27 May 1987 (1987-05-27)	1,3,6,10
Y	column 7, line 7 - line 25; figure 13 -----	2
Y	DE 39 34 517 A1 (LAING KARSTEN [DE]) 18 April 1991 (1991-04-18) claim 1 -----	2
A	DE 36 19 016 A1 (ZILLNER GUENTER [DE]) 10 December 1987 (1987-12-10) figure column 5, line 45 - column 7, line 45 -----	1,3,10
A	WO 2007/046855 A2 (OU WEN-SHOW [US]) 26 April 2007 (2007-04-26) figure 3 -----	1,3,6,7

Further documents are listed in the continuation of Box C.

See patent family annex.

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 3541713	A1	27-05-1987	NONE

DE 3934517	A1	18-04-1991	NONE

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WO 2007046855	A2	26-04-2007	AU 2007202622 A1 18-12-2008
