# (11) EP 2 360 354 A3

(12)

### **EUROPEAN PATENT APPLICATION**

- (88) Date of publication A3: **27.06.2012 Bulletin 2012/26**
- (51) Int Cl.: F01K 7/02<sup>(2006.01)</sup> F01K 13/02<sup>(2006.01)</sup>

F01K 25/08 (2006.01)

- (43) Date of publication A2: **24.08.2011 Bulletin 2011/34**
- (21) Application number: 10186737.2
- (22) Date of filing: 06.10.2010
- (84) Designated Contracting States:

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME

- (30) Priority: 13.10.2009 US 577893
- (71) Applicant: General Electric Company Schenectady, NY 12345 (US)
- (72) Inventors:
  - Ast, Gabor 85748, Garching b. München (DE)

- Frey, Thomas Johannes
   85748, Garching b. München (DE)
- Huck, Pierre Sebastien 85748, Garching b. München (DE)
- Kopecek, Herbert 85748, Garching b. München (DE)
- Bartlett, Michael Adam 11769, Stockholm (SE)
- (74) Representative: Bedford, Grant Richard Global Patent Operation - Europe GE International Inc.
   15 John Adam Street London WC2N 6LU (GB)

#### (54) Rankine Cycle System

(57) The rankine cycle system (10) includes an evaporator (12) coupled to a heat source (14) and configured to circulate a working fluid in heat exchange relationship with a hot fluid from the heat source (14) so as to heat the working fluid and vaporize the working fluid. An expander (16) is coupled to the evaporator (12) and configured to expand the vaporized working fluid from the evaporator (12). The exemplary expander (16) is operable at variable speed. A condenser (20) is coupled to the expander (16) and configured to condense the vaporized working fluid from the expander (16). A pump (22) is coupled to the condenser (20) and configured to feed the condensed working fluid from the condenser (20) to the evaporator (12).

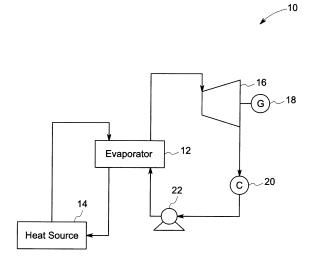


FIG. 1

EP 2 360 354 A3



## **EUROPEAN SEARCH REPORT**

Application Number EP 10 18 6737

	DOCUMENTS CONSIDER	ED TO BE RELEVANT		
Category	Citation of document with indica of relevant passages		Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
E	WO 2010/129003 A1 (DA RONALD D [US]) 11 November 2010 (201 * page 12, line 14 - figures *		1-4,6-9	INV. F01K7/02 F01K25/08 F01K13/02
Х	UND KRAFT [DE]) 28 February 2008 (200		1,2,5-9	
Υ	* paragraphs [0002] -	[0024]; figures *	10	
Х	EP 2 014 880 A1 (UNIV 14 January 2009 (2009 * paragraphs [0062], [0088], [0011] - [01	-01-14) [0068], [0074],	1-7	
Υ	US 2009/000299 A1 (AST GA 1 January 2009 (2009-01-0		10	
A	* paragraphs [0021] -	[0028]; figures 1,2	1,2	
	-			TECHNICAL FIELDS SEARCHED (IPC)
				F01K F02G
	The present search report has been	n drawn up for all claims  Date of completion of the search		- Consideration
Place of search  Munich		21 May 2012	Henkes, Roeland	
X : parti Y : parti docu A : tech	ATEGORY OF CITED DOCUMENTS icularly relevant if taken alone icularly relevant if combined with another iment of the same category nological background written disclosure	T : theory or principle E : earlier patent doo after the filing date D : document oited in L : document oited for	ument, but publis the application rother reasons	shed on, or

#### ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 10 18 6737

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

21-05-2012

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2010129003	11-11-2010	AU 2010245288 A1 CN 102422006 A EP 2427645 A1 US 2009277400 A1 WO 2010129003 A1	24-11-2011 18-04-2012 14-03-2012 12-11-2009 11-11-2010
DE 202007016668	J1 28-02-2008	NONE	
EP 2014880	14-01-2009	CA 2692629 A1 EP 2014880 A1 EP 2181249 A2 US 2010194111 A1 WO 2009007408 A2	15-01-2009 14-01-2009 05-05-2010 05-08-2010 15-01-2009
US 2009000299	41 01-01-2009	EP 2203630 A2 US 2009000299 A1 WO 2009006006 A2	07-07-2010 01-01-2009 08-01-2009

 $\stackrel{\circ}{\mathbb{L}}$  For more details about this annex : see Official Journal of the European Patent Office, No. 12/82