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(81) **Designated States** (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

[Continued on next page]

(54) **Title:** SYSTEM AND METHOD FOR RECOVERING WASTE HEAT

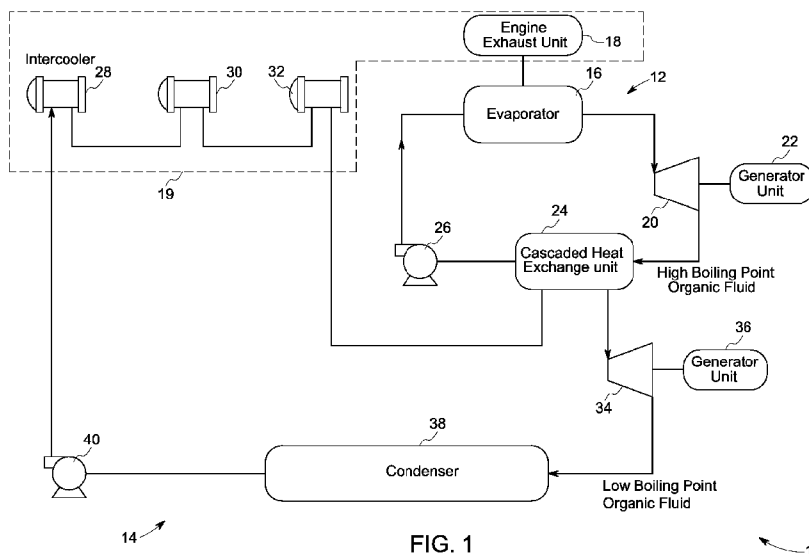


FIG. 1

(57) **Abstract:** A waste heat recovery system (10) includes at least two integrated rankine cycle systems (12, 14) coupled to at least two separate heat sources having different temperatures. The first rankine cycle system (12) is coupled to a first heat source (18) and configured to circulate a first working fluid. The second rankine cycle system (14) is coupled to at least one second heat source (28, 30, 32) and configured to circulate a second working fluid. The at least one second heat source includes a lower temperature heat source than the first heat source. The first and second working fluid are circutable in heat exchange relationship through a cascading heat exchange unit (24) for condensation of the first working fluid in the first rankine cycle system and evaporation of the second working fluid in the second rankine cycle system.

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INTERNATIONAL SEARCH REPORT

International application No
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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
 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, WPI Data

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2006/104490 A1 (UTC POWER LLC [US]; RADCLIFF THOMAS D [US]; BIEDERMAN BRUCE P [US]; BR) 5 October 2006 (2006-10-05)	1-5, 7, 8, 10, 15-21, 24-27, 30-33, 38-41, 45
Y	paragraphs [0003] - [0011], [0020], [0023], [0032]; claims 1-38; figures	6, 11-14, 22, 23, 28, 29, 34-37, 42-44
X	----- EP 1 333 157 A1 (HONDA MOTOR CO LTD [JP]) 6 August 2003 (2003-08-06)	1-6, 10, 24-26, 28-33, 41
A	paragraphs [0003] - [0019]; figure 1 ----- -/--	40

Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents :

<p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"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</p> <p>"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</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"&" document member of the same patent family</p>
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Date of the actual completion of the international search 25 May 2010	Date of mailing of the international search report 08/06/2010
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Henkes, Roeland
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INTERNATIONAL SEARCH REPORT

 International application No
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

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A	page 2, line 15 - page 15, line 19; figures	1-5,7, 16,17, 24,26
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A	paragraphs [0004] - [0034]; figures 1,6 page 10, line 18 - page 15, line 15	8,40
X	WO 85/03328 A1 (SOLMECS CORP NV [NL]) 1 August 1985 (1985-08-01)	1-5,7,9, 10,17, 24, 29-33,41
A	page 6, line 16 - page 12, line 12; figures	6,40
X	DE 34 20 293 A1 (ORMAT TURBINES [IL] ORMAT TURBINES 1965 LTD [IL]) 21 February 1985 (1985-02-21)	1,7,8, 15,24, 25,40
A	page 11, line 30 - page 15, line 18; claims 1-7,16; figures	11,13,30

INTERNATIONAL SEARCH REPORT

Information on patent family members

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