

09/10/03
2002059755

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



162162

(43) International Publication Date
4 September 2003 (04.09.2003)

PCT

(10) International Publication Number
WO 03/072384 A1

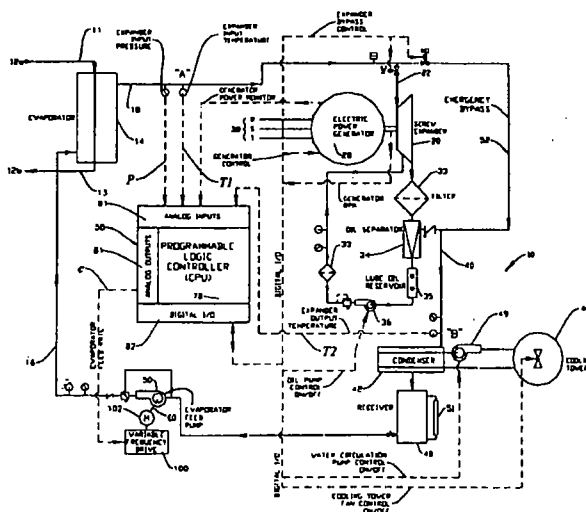
- (51) International Patent Classification⁷: **B60K 16/00** (74) Agent: DULIN, Jacques, M.; Innovation Law Group, Ltd., Suite 201, 224 W. Washington Street, Sequim, WA 98382-3338 (US).
- (21) International Application Number: PCT/US03/05899
- (22) International Filing Date: 25 February 2003 (25.02.2003) (81) Designated States (national): AE, AU, BR, CA, CN, GE, HU, ID, IL, IN, IS, JP, KR, LT, LV, MX, NO, NZ, PH, PL, RO, SG, UA, ZA.
- (25) Filing Language: English
- (26) Publication Language: English (84) Designated States (regional): Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR).
- (30) Priority Data:
60/360,072 25 February 2002 (25.02.2002) US
10/374,581 24 February 2003 (24.02.2003) US
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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)) for the following designations AE, AU, BR, CA, CN, GE, HU, ID, IL, IN, IS, JP, KR, LT, LV, MX, NO, NZ, PH, PL, RO, SG, UA, ZA, Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR)
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for the following designations AE, AU, BR, CA, CN, GE, HU, ID, IL, IN, IS, JP, KR, LT, LV, MX, NO, NZ, PH, PL, RO, SG, UA, ZA,

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(54) Title: WASTE HEAT SOLAR ENERGY SYSTEM



(57) Abstract: Recovery of electric power from low-grade waste heat/solar energy, comprising a closed-cycle charged refrigerant loop. Pressurized refrigerant fluid is pumped at ambient temperature through a heat exchanger (14) connected to a waste heat/solar source to extract heat energy during conversion to a high pressure gas. Heated/pressurized refrigerant gas is inlet into an expander (20) to power an output shaft (26) during the expansion of the fluid to a cooled gas at approximately 0 psig. Cooled gaseous refrigerant is condensed to a liquid at low pressure and ambient temperature, and recycled under pressure to the heat exchanger. The expander is a reverse-plumbed gas compressor; the pressurized, hot refrigerant gas is inlet at what is ordinarily its outlet, and the normal inlet becomes the expander end. The refrigerant gas mass flow pressure/temperature drop spins the expander shaft for direct mechanical power take-off, or coupling to a synchronous or inductive generator to produce electricity.

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