

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO	
RAD: 13-247109- -2	FECHA: 2015-09-10 07:20:34
DEP: 2020 DIRECCION DE NUEVAS CREACIONES	EVE: 1 REGISTRO/DEPOSITO/CONCESION/DEPOSITO
TRA: 2 PATENTES DE INVENCION	FOLIOS: 4
ACT: 430 REQUERSOLICITA	

DIRECCIÓN DE NUEVAS CREACIONES

2020
Bogotá, D.C.,

Abogado(a)/Señor(a)
LAURA MARCELA MANZANO JIMENEZ

Asunto: Radicación: 13-247109- -2
 Trámite: 2
 Evento: 1
 Actuación: 430
 Oficio: 10612
 Folios: 4

Patente de Invención	X			Patente de Modelo de Utilidad	
Vía Nacional	X				
Vía PCT (Fase Nacional)		Capítulo I		Capítulo II	
No. Solicitud Internacional					
Fecha de Presentación Internacional					

Como resultado del Examen de Fondo realizado, con fundamento en el Artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se comunica:

1. Documentos estudiados

Descripción:	Rad. N° 13-247109-00000-0000	18/Octubre/2013
Reivindicaciones:	Rad. N° 13-247109-00000-0000	18/Octubre/2013
Dibujos:	Rad. N° 13-247109-00000-0000	18/Octubre/2013

2. Objeto de la invención

De acuerdo con lo establecido en el numeral 1.2.2.2 del Capítulo Primero del Título X de la Circular Única para efectos del examen de patentabilidad, se tendrá en cuenta la tasa pagada por el solicitante al momento de comenzar el examen para las reivindicaciones adicionales; esto es que cuando la solicitud contenga más de diez (10) reivindicaciones y no se haya pagado la tasa complementaria, sólo se estudiarán las cubiertas por la tasa pagada. Por lo tanto, se estudiarán las reivindicaciones 1 a 10.

Título de la solicitud: “Máquina de hielo que utiliza energía no convencional para refrigerar los alimentos”.

El problema planteado en esta solicitud consiste en obtener una maquina para producción de hielo empleando como fuente de energía únicamente la luz solar, aprovechándola de manera eficiente, sin generar algún impacto ambiental, mejorar la producción de hielo con respecto a las tasas usualmente conocidas, y que se pueda usar en zonas de difícil acceso geográfico.

Para resolver este problema técnico, la solicitud en estudio plantea una máquina que cuenta con una unidad de generación con colector solar, un sistema distribuidor-condensador, una unidad de evaporación, una bomba de vacío, un tanque y un sistema de válvulas.

El objeto de la presente Solicitud se relaciona con la Clasificación Internacional de Patentes (CIP): F 25 C 5/12.

3 . De la Solicitud de Patente

Reivindicaciones (Art 30 D 486, Art 22 PCT)

En la reivindicación 1 los fragmentos “*que suministra la potencia necesaria a la máquina de hielo*”, “*que se cierran en el día y en la noche se abren para facilitar el enfriamiento óptimo de la máquina de hielo*”, “*encargada de generar el vacío necesario para mover el fluido que va desde la unidad de la unidad de generación (2), pasa por el sistema distribuidor-condensador (3) y luego va a la unidad de evaporación (4)*”, “*donde dicho tanque (6) se utiliza únicamente al comienzo del sistema para realizar la carga de metanol a dicho sistema*” y “*crear vacío en el sistema e independizar el sistema de colector solar (2) y el sistema condensador (3) de la unidad de evaporación (4)*” están descritos como resultados a obtener, funcionalidades o efectos técnicos, lo cual no se permite en las reivindicaciones, puesto que incluirían no solo la solución propuesta por los solicitantes, sino todas las alternativas futuras que lleguen a esos resultados. Se sugiere omitirlos o reemplazarlos por las características esenciales, estructurales o geométricas que permiten la obtención de dichos efectos.

En la reivindicación 1 la frase “*no mostrado*” se recomienda omitirla para darle más claridad a la invención.

En la reivindicación 9 la frase “*para facilitar la visualización del proceso de enfriamiento*” describe una ventaja, lo cual no es permitido en el pliego reivindicatorio, se sugiere omitirla.

4. Determinación del Estado de la Técnica

El estado de la técnica se determinó con base en la fecha de presentación de la solicitud, es decir 18 de octubre de 2013, y no se encontraron documentos que anticipen la invención de la solicitud en su totalidad.

El documento más cercano al de la solicitud es el documento CN2197640 publicado el 17 de mayo de 1995, el cual divulga una maquina productora de hielo a partir de la absorción de la energía solar de ciclo cerrado la cual consta de un colector de calor, un reactor que está conectado con un condensador conectado con un tanque de almacenamiento de fluido, y el tanque de almacenamiento de fluido está conectado con un refrigerador. La diferencia entre dicho documento y la solicitud, es la inclusión de un sistema de colector solar con coraza, dos partes semiconcavas y unas compuertas, cuyo efecto técnico es permitir aumentar el aprovechamiento de la energía solar disponible durante el día, así

como potenciar el ciclo de enfriamiento.

5. Conclusión

Los requisitos de patentabilidad de la actual reivindicación independiente 1, al igual que sus reivindicaciones dependientes, no se encuentran afectados. Sin embargo, se requiere que los solicitantes realicen las correcciones o aclaraciones necesarias a las objeciones realizadas en el numeral 3 del presente requerimiento para continuar su trámite.

En cumplimiento del artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le indica que debe dar respuesta dentro del término de sesenta (60) días contados a partir del día siguiente de la fecha de notificación de la presente comunicación. En caso de no dar respuesta al presente requerimiento, o si a pesar de la respuesta subsistieran los impedimentos para la concesión, se denegará la patente.

Se invita al solicitante se sirva indicar, si así lo considera, su renuncia al término faltante de sesenta (60) días para dar respuesta a este requerimiento y presentarla por escrito.

Finalmente, se le recuerda al solicitante que si como respuesta a este requerimiento llegara a modificar el capítulo reivindicatorio y éste contenga más de diez (10) reivindicaciones, no pagará la tasa de modificación voluntaria pero sí la correspondiente al pago por reivindicación adicional.

Notifíquese el presente oficio conforme a lo dispuesto en el numeral 5.2, literal e), del capítulo quinto del título primero de la Circular Única No. 10 de 2001.



JOSÉ LUIS SALAZAR LÓPEZ
Director de Nuevas Creaciones (c)

El anterior requerimiento fue notificado por fijación en lista, de fecha 2015-09-15

Elaboró: Julian Felipe Mora Nova
Revisó: Angelica Maria Ramirez

julian

Search history

- Search 1: TAC=(machine and ice and solar and system) (Results 83)
- Search 2: TAC=(machine and ice and solar and system and pipe*) (Results 42)
- Search 3: TAC=(machine and ice and solar and system and pip**) (Results 45)
- Search 4: TAC=(machine and ice and solar and system and pip* and evaporation) (Results 9)
- Search 5: TAC=(machine and ice and solar and system) (Results 83)
- Search 6: TAC=(machine and ice and solar and system and pump and vacuum) (Results 12)
- Search 7: TAC=(solar and refrigeration and evaporation) (Results 234)
- Search 8: TAC=(solar and refrigeration and evaporation and pump and vacuum) (Results 27)
- Search 9: TAC=(solar and collector and refrigeration and evaporation and pump and vacuum) (Results 8)

Title: SORPTION SYSTEM FOR LOW-GRADE (SOLAR) HEAT UTILIZATION

Abstract: Source: US4034569A A system for the effective utilization of low-grade heat sources such as solar energy, with a system including a molecular sieve material such as zeolite and a gaseous fluid adapted to be absorbed by the material which is in a closed container and circuit which includes a condenser and a gas expansion cooler member. When the container is heated, a gas is given off from the molecular sieve material, cooled in a condenser, and thereafter expanded for cooling purposes. In one embodiment, the cooled gas is received in a further container having absorbent material and subsequently, upon cooling of the first container, the gaseous fluid may be returned thereto via again a condenser and gas expansion cooler member to provide further cooling. In another embodiment, the molecular sieve material is formed by sintering same to form a pressure resistant divider across the container. One side of the divider is heated to create a temperature gradient across the divider so that it functions as a heat energized pump for the gaseous fluid which is adsorbed, a pressure as well as temperature differential developing within the container across the divider whereupon the heated pressurized gas, after giving up some of its energy in a circuit which may include a condenser and gas expansion member, is returned to the container to be again pressurized and heated by the action of the divider composed of the molecular sieve material.

Classifications:

International (IPC 8-9): F03G6/00 F03G7/00 F24J2/04 F24J2/24 F24J2/28 F24J2/32 F24J2/34 F24J2/44 F24J2/46 F24J2/48 F24J2/51 F25B17/00 F25B17/08 F25B27/00

F25B29/00 F28D20/00 (Advanced/Invention);

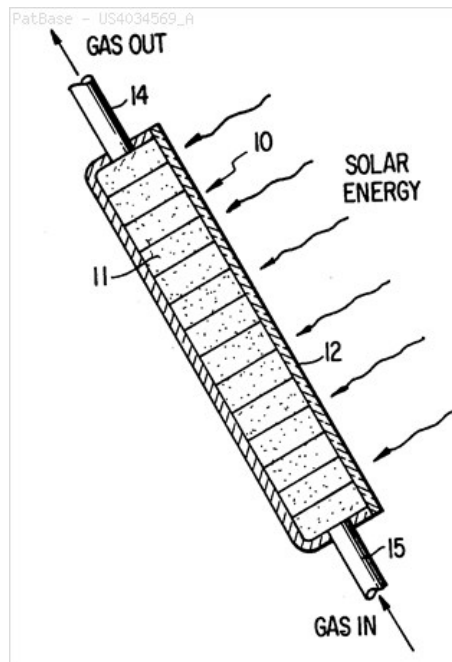
F24J2/04 F24J2/42 F25B17/00 F25B27/00 F25B29/00 F28D20/00 (Core/Invention); F24J (Subclass/Invention)

International (IPC 1-7): F03G7/02 F04B19/24 F24F3/00 F24J2/28 F24J3/02 F25B15/00 F25B17/00 F25B17/04 F25B17/08 F25B27/00 F25B29/00 F25B37/00 F25B7/00 F28D

CPC: F03G6/00 F03G7/005 F24J2/32 F24J2/34 F24J2/46 F24J2/465 F24J2/485 F24J2/51 F28D20/006 Y02E10/46 F25B29/006 Y02B10/24 F25B27/002 F24J2/04 F24J2/28 F25B17/08 F25B27/007 F28D20/003 Y02B30/62 Y02B30/64 Y02E10/44 Y02E60/142 Y02E70/30

European: F03G6/00 F03G7/00C F24J2/04 F24J2/28 F24J2/32 F24J2/34 F24J2/46C F24J2/46F F24J2/48F F24J2/51 F25B17/08 F25B27/00B F25B27/00B4 F25B29/00C F28D20/00B R28D20/00S Y02B10/20 Y02B10/24 Y02B30/62 Y02B30/64 Y02E10/44 Y02E10/46 Y02E60/14B Y02E70/30

US: 126/429 126/628 126/674 252/67 417/53 60/641 60/641.14 62/106 62/112 62/2 62/235.1 62/476 62/480 62/490

**Family:**

Publication number	Publication date	Application number	Application date
AU197724701 A1	19781102	AU19770024701	19770429
AU198542934 A1	19851128	AU19850042934	19850430
AU512995 B2	19801106	AU19770024701	19770429
AU583824 B2	19890511	AU19850042934	19850430
BRPI8506713 A	19860923	BR1985PI06713	19850430
CA1120736 A1	19820330	CA19800345460	19800212
CA1341564 A1	20071204	CA19850480366	19850430
CH647590 A	19850131	CH19800000959	19800206
DE3582224 D1	19910425	DE19853582224	19850430
DK165022 B	19920928	DK19850006090	19851230
DK165022 C	19930208	DK19850006090	19851230
DK609085 A	19851230	DK19850006090	19851230
DK609085 A0	19851230	DK19850006090	19851230
EP0181375 A1	19860521	EP19850902379	19850430
EP0181375 A4	19860922	EP19850902379	19850430
EP0181375 B1	19910320	EP19850902379	19850430
FR2391434 A1	19781215	FR19770015288	19770518
FR2391434 B1	19820611	FR19770015288	19770518
IT1147996 A	19861126	IT19820048485	19820521
IT8248485 A0	19820521	IT19820048485	19820521
JP1600295 C3	19910131	JP19820084111	19820520
JP1980785 C3	19951017	JP19850501938	19850430
JP2022305 B4	19900518	JP19820084111	19820520
JP57198960 A2	19821206	JP19820084111	19820520
JP6105141 B4	19941221	JP19850501938	19850430
JP61502008 T2	19860911	JP19850501938T	19850430
NL8000636 A	19800814	NL19800000636	19800131
US4034569 A	19770712	US19740520808	19741104
US4138850 A	19790213	US19760710609	19760802
US4556049 A	19851203	US19810267074	19810526
US4584842 A	19860429	US19790011689	19790212
US4637218 A	19870120	US19850801491	19851118
US5237827 A	19930824	US19900593382	19901002
US5729988 A	19980324	US19880140890	19880104
WO8505170 A1	19851121	WO1985US00783	19850430
ZA8000790 A	19810225	ZA19800000790	19800212

Priority:

US19740520808 19741104	US19760710609 19760802	AU19770024701 19770429
US19810231409 19810204	FR19770015288 19770518	WO1985US00783 19850430
US19840605812 19840501	US19790011689 19790212	US19810267074 19810526
US19900593382 19901002	US19880186741 19880425	US19850785025 19851007
US19880140890 19880104	US19850801491 19851118	US19850817854 19851230
CA19850480366 19850430		

Probable Assignee: TCHERNEV D I

Assignee(s): (std): DIMITER IVANOV TCHERNEV ; DIMITER IVANOV TCHERNEV DR ING ; DIMITER IVANOV TCHERNEV TE CHESTNUT HILL MASSACHUS ; TCHERNEV D I ; TCHERNEV DIMITER I ; TCHERNEV DIMITER ; TCHERNEV D ; DR ING DIPL ING DIMITER IVANOV TCHERNEV ; CHAANEU DEIMITAA AI ; DEIMITAA AI CHIYAANEBU

Assignee(s): DIMITER I TCHERNEV ; DEIMITAA AI CHAANEU ; DR ING ; DIMITERR I TCHERNEV ; TCHERNEV DIMITERR I ; TCHERNEV DIMITER I DR SUDBURY MASS US ; DIMITER IVANOV TCHERNEV TE CHESTNUT HILL MASSACHUSETTS VER ST V AM ; TCHERNEV DI

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Inventor(s): DEIMITAA AI CHAANEU ; DIMITRE I TCHEMEV

Designated states: AU BR CH DE DK FR GB IT JP LI NL SE US

Title: HEAT ENERGY RECAPTURE AND RECYCLE AND ITS NEW APPLICATIONS

Abstract: Source: US2005120715A What has been created is a plurality and a variety of processes and a variety of devices correspondingly supportive to each process, wherein, a new partnership between; (1) a heat absorbing radiator compressed air pipes/tubes and (2) a gas turbine engine or a reciprocating piston engine, -is used to recapture and convert the, otherwise wasted, heat energies expelled by engines, by factories, by smelting plants, by distillation plants, by chillers/coolers/freezers, by cooking ovens, by lamps/stoves, by trash burners, and the heat energies created by the **solar** heat on the desert/ocean water, -into electric power and finally into hydrogen-deuterium fuel, -by having the engine's tailpipes submerged in cold compressed air inside the heat absorbing radiator pipes in reverse air flow, to further drive and re-drive the same engine; wherein, in order to capture fusion heat energy the hydrogen bomb is detonated in the deep ocean to catch the flames by the water and the hot water is used to energize the compressed air inside the heat absorbing radiator pipes; wherein, in order to produce fusion energy, an abundant electric arc is passed across liquid deuterium or across gaseous deuterium by the electro-plasma torch and sparkplug in the internal combustion engine, and by detonating a dynamite inside a liquid deuterium; wherein diamond is produced by placing carbon inside the hydrogen bomb; and wherein, deuterium fusion glass is used first in smelting glass to large sizes before running an engine.

Classifications:

International (IPC 8-9): B01D61/10 B63B1/10 B63B1/12 B63B35/00 B63B35/44 B63B39/06 B63B43/06 B63G1/00 B63G8/30 B63H19/02 B63H9/06 B63H9/10 B63J3/00 B64C31/04 B64C31/06 E02B3/06 F01K13/00 F01K23/10 F01K27/00 F02C1/00 F02C1/05 F02G5/00 F03B13/18 F03D11/04 F03D5/00 F03D5/04 F03G7/00 F24F5/00 F24F6/14 F28D5/00 (Advanced/Invention); B63B1/24 B63J1/00 F24F1/00 (Advanced/Non-invention); B01D61/02 B63B1/00 B63B35/00 B63B35/44 B63B43/00 B63H9/00 B63J3/00 E02B3/06 F01K23/10 F01K27/00 F02C1/00 F02G5/00 F03B13/00 F03D5/00 F03G7/00 (Core/Invention)

International (IPC 1-7): B01D61/10 B63B17/00 B63B35/00 B63B7/00 F01K23/10 F03D5/02 F03D5/04 F03G7/00 F04B35/00 F24F6/14 F28D5/00

CPG: F05B2210/18 B63H9/06 B63H9/1021 F05D2260/212 F01K27/00 F02C1/05 F03G7/00 Y02T50/672 Y02T50/676 B63B1/121 Y02W10/33 Y02W10/37 B63B1/107 B63B1/24 B63B39/06 B63B2039/067 B63G1/00 B63G8/30 B63H19/02 B63J1/00 C02F1/04 F05B2240/40 Y02T70/59 F03D11/04 B01D61/10 B63B35/00 B63B35/44 B63B43/06 B63B2035/446 B63B2035/4466 B63J3/00 B64C31/04 B64C31/06 E02B3/062 E02B2017/0091 F03B13/182 F03D5/00 F03D5/04 F05B2240/921 F05B2240/922 F24F5/0035 F24F6/14 F24F2001/0088 F28D5/00 Y02B10/30 Y02B10/50 Y02B30/545 Y02E10/38 Y02E10/70 Y02E10/728

European: B01D61/10 B63B1/10C B63B1/12B B63B35/00 B63B35/44 B63B39/06 B63B43/06 B63G1/00 B63G8/30 B63H19/02 B63H9/06 B63H9/10 B63H9/10C B63J3/00 B64C31/04 B64C31/06 E02B3/06B F01K27/00 F02C1/05 F03B13/18B2D F03D11/04 F03D5/00 F03D5/04 F03G7/00 F24F5/00C7 F24F6/14 F28D5/00 L63B1/24 L63B35/44 L63B35/44E9 L63B39/06R L63B43/06 L63H9/10 L63J1/00 L63J3/00 M02F1/04 P02B17/00M R05B210/18 R05B240/40 R05B240/921 R05B240/922 R05B240/931 R05B260/212 R24F1/00G1 Y02B10/30 Y02B10/50 Y02B30/14 Y02B30/54D Y02E10/38 Y02E10/70 Y02E10/72L Y02E10/72N Y02E20/18 Y02T50/67B2 Y02T50/67F2 Y02T70/59

US: 114/267 114/382 114/39.1 114/39.2 114/39.26 114/39.29 114/39.31 210/136 210/170 210/259 210/321.87 244/153.00R 244/153R 244/24 405/76 415/5 416/8 417/330 417/332 60/39.01 60/506 60/618 60/618P 60/676 60/698 60/698P 60/772 62/304 62/310 62/314 623/40

Family:

Publication number	Publication date	Application number	Application date
AP200704109 A0	20070831	AP20070004109	20050727
AU2005325208 AA	20060727	AU20050325208	20050727
AU2005325208 BB	20120329	AU20050325208	20050727
CA2397847 AA	20040212	CA20022397847	20020812
CA2404410 AA	20040320	CA20022404410	20020920
CA2599414 AA	20070823	CA20052599414	20050727
CN101146981 A	20080319	CN200580049207	20050727
EA200701538 A1	20081030	EA20070001538	20050727
EP1851418 A1	20071107	EP20050779535	20050727
EP1851418 A4	20090513	EP20050779535	20050727
IN05612DN2007 A	20070831	IN2007DN05612	20070719
US2005120715 AA	20050609	US20050039624	20050120
US2008155985 AA	20080703	US20050795835	20050727
US4756666 A	19880712	US19840631321	19840719
US4859146 A	19890822	US19880177599	19880405
US5027735 A	19910702	US19900472753	19900131
US5052902 A	19911001	US19860820082	19860121
US5056447 A	19911015	US19880255657	19881013
US5094595 A	19920310	US19890376002	19890815
US5435259 A	19950725	US19930097655	19930727
US5507943 A	19960416	US19910811470	19911218
US6293121 BA	20010925	US19980137499	19980820
US6327994 BA	20011211	US19970999729	19971223
US8051637 BB	20111108	US20050795835	20050727
WO06078315 A1	20060727	WO2005US26793	20050727
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Priority:

US19840631321 19840719	US19840631322 19840719	US19860820082 19860121
US19880255719 19881013	US19900472753 19900131	US19880177599 19880405
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US19910811470 19911218	US20050039624 20050120	WO2005US26793 20050727
US19970999729 19971223	US19980137499 19980820	PH20040000148 20040325

Probable Assignee: CHRISTION SCHOOL OF TECHNOLOGY

Assignee(s): (std): CHRISTIAN SCHOOL OF TECHNOLOGY CHARITABLE FOUNDATION TRUST ; CHRISTION SCHOOL OF TECHNOLOGY ; GAUDENCIO LABRADOR ; LABRADOR GAUDENCIO A ; LABRADOR GAUDENCIO AQUINO ; LABRADOR GAUDENCIO ; CHRISTIAN SCHOOL OF TECHNOLOGY

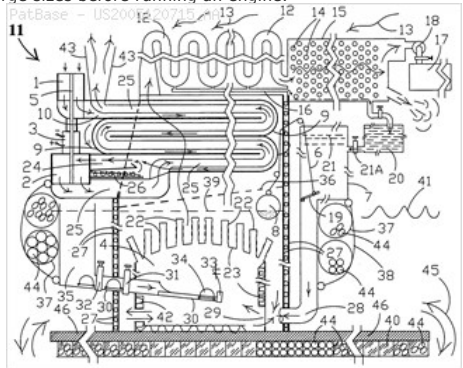
Assignee(s): CHRISTIAN SCHOOL OF TECHNOLOGY CHARITABLE FOUNDATI ; CHRISTION SCHOOL OF TECHNOLOGY CHARITABLE FOUNDATI ; CHRISTION SCHOOL OF TECHNOLOGY CHARITABLE FOUNDATION TRUST

Inventor(s): (std): LABRADOR GAUDENCIO A ; LABRADOR GAUDENCIO AQUINO ; CHRISTIAN SCHOOL OF TECHNOLOGY

Inventor(s): CHRISTIAN SCHOOL OF TECHNOLOGY CHARITABLE ; LABRADOR GAUDENCIO ; GAUDENCIO AQUINO LABRADOR

Agent(s): GAUDENCIO AQUINO LABRADOR

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW



Title: Room air conditioning unit replaces window ventilation with combined unit having air intake, filtration, heating and cooling units with automatically operated control flaps

Abstract: The unit has air inlet and outlet flaps (24), a roller filter (6,22), humidifiers (8), a cooler (10) and heat recovery unit (23). The complete system is controlled by a switch cabinet (9) and the basic assembly may be adapted the variously sized rooms.

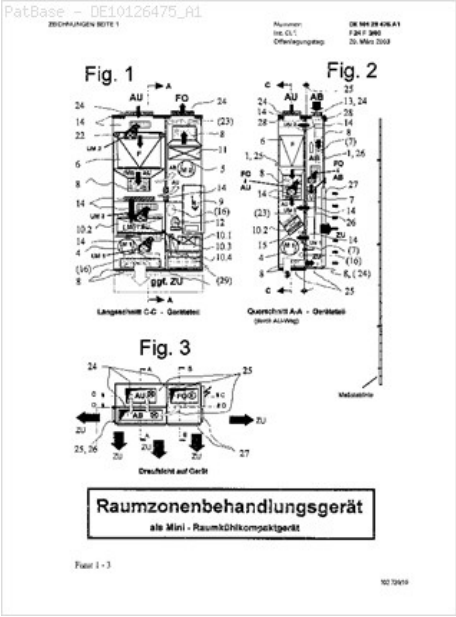
Classifications:

International (IPC 8-9): F24F3/044 (Advanced/Invention); F24F3/044 (Core/Invention)

International (IPC 1-7): F24C3/00 F24F3/00

CPC: F24F3/0442 F24F2011/0006 Y02B30/542

European: F24F3/044B R24F11/00C3 Y02B30/54B



Family:

Publication number	Publication date	Application number	Application date
DE10126475 A1	20030320	DE20011026475	20010531
DE20208391 U1	20030528	DE20022008391U	20020529

Priority:

DE20011026475 20010531 DE20022008391U 20020529

Probable Assignee: LOOSE JUERGEN

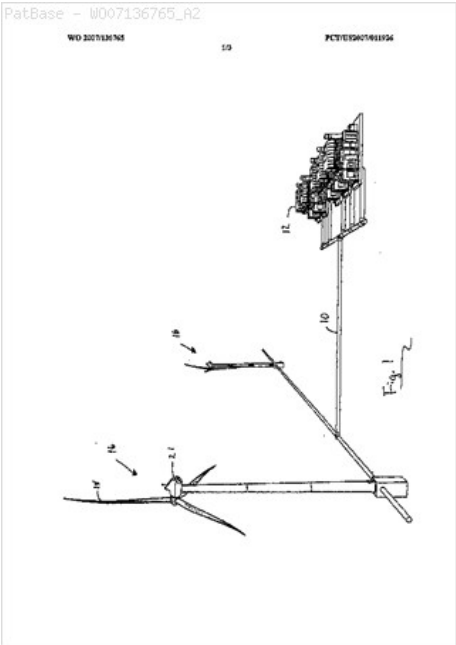
Assignee(s): (std): LOOSE JUERGEN

Inventor(s): (std): LOOSE JUERGEN

Title: USE OF INTERSECTING VANE MACHINES IN COMBINATION WITH WIND TURBINES

Abstract: Source: US2005135934A Accordingly, it is an object of this invention to provide a fluid compressor comprising: a rotatable turbine mounted to a mast; a toroidal intersecting vane compressor (TIVC) characterized by a fluid intake opening and a fluid exhaust opening, wherein the rotation of the turbine drives the compressor. The combination of the TIVC and turbine permits good to excellent control over the hours of electrical power generation, thereby maximizing the commercial opportunity and meeting the public need during hours of high usage. Additionally, the invention avoids the need to place an electrical generator off-shore. Further, the apparatuses of the invention can be operated with good to excellent efficiency rates.

Classifications:
International (IPC 8-9): B63H1/06 F01K13/00 F01K27/00 F02C1/05 F02C6/16 F03D9/00 F03D9/02 F03G6/06 F03G7/00 (Advanced/Invention); B63H1/00 F01K13/00 F01K27/00 F02C1/00 F02C6/00 F03D9/00 F03G6/00 F03G7/00 (Core/Invention); F01K (Subclass/Invention)
International (IPC 1-7): B63H1/06 F01K13/00
CPC: Y02E10/72 F03D9/028 F02C1/05 F02C6/16 F03D9/001 F03D9/007 F03G6/064 Y02E10/465 Y02E60/15 F05B2260/211 F05B2260/212 F05B2210/16
European: F02C1/05 F02C6/16 F03D9/00B F03D9/00E F03D9/02D F03G6/06G R05B210/16 R05B260/211 R05B260/212 Y02E10/46U Y02E10/72H Y02E60/15 Y02E60/17
US: 416/132.00B 416/132.00BP 416/132B 60/641.1 60/641.100P 60/645 60/645P



Family:

Publication number	Publication date	Application number	Application date
EP1709301 A2	20061011	EP20040818079	20041222
EP1709301 A4	20080319	EP20040818079	20041222
IN03584DN2006 A	20070831	IN2006DN03584	20060621
US2005135934 AA	20050623	US20030744232	20031222
US2006150629 AA	20060713	US20060342295	20060127
US2006248892 AA	20061109	US20060437419	20060519
US2006260311 AA	20061123	US20060437406	20060519
US2006260312 AA	20061123	US20060437408	20060519
US2006260313 AA	20061123	US20060437424	20060519
US2006266034 AA	20061130	US20060437261	20060519
US2006266035 AA	20061130	US20060437423	20060519
US2006266036 AA	20061130	US20060437836	20060519
US2006266037 AA	20061130	US20060438132	20060519
US2007062194 AA	20070322	US20060437407	20060519
WO05062969 A2	20050714	WO2004US43504	20041222
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WO07136731 A2	20071129	WO2007US11877	20070519
WO07136731 A3	20080320	WO2007US11877	20070519
WO07136765 A2	20071129	WO2007US11926	20070519
WO07136765 A3	20080320	WO2007US11926	20070519
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ZA200605969 A	20071128	ZA20060005969	20060719

Priority:		
US20030744232 20031222	WO2004US43504 20041222	US20060342295 20060127
US20060437836 20060519	US20060437423 20060519	US20060437261 20060519
US20060438132 20060519	US20060437407 20060519	US20060437419 20060519
US20060437424 20060519	US20060437408 20060519	US20060437406 20060519
US20060437406 20060519		

Probable Assignee: GENERAL COMPRESSION INC

Assignee(s): (std): INGERSOLL ERIC ; MARCUS DAVID ; MARCUS DAVID RITVO ; MECHANOLGY INC ; MECHANOLGY LLC ; GEN COMPRESSION INC

Assignee(s): GENERAL COMPRESSION INC ; PRAIRE GOLD VENCAP FUND I LP

Inventor(s): (std): ERIC INGERSOLL ; INGERSOLL ERIC ; MARCUS DAVID ; MARCUS DAVID RITVO

Agent(s): ELMORE CRAIG PC; ELMORE PATENT LAW GROUP PC; HELLER EHRMAN LLP

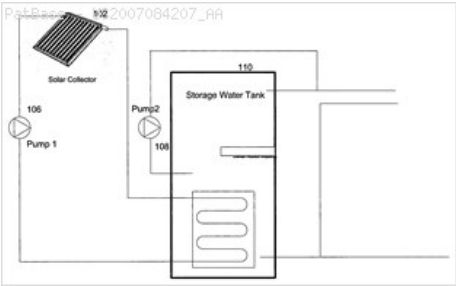
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Title: THERMALLY DRIVEN COOLING SYSTEMS

Abstract: Source: US2007084207A Designs of cooling systems that operate entirely on solar energy are disclosed. Such cooling systems may be used in refrigeration and air conditioning. According to one aspect of the designs, a solar energy collecting device is disposed outdoor to collect solar energy. A first heat-to-electricity pump operating on heated liquid is provided to produce electricity. A storage tank is used to store heated water. A second heat-to-electricity pump is disposed in the storage and operates on the heated water to generate electricity. A cooling system operates on at least three types of working fluids to achieve low temperature evaporation and high temperature condensation to derive cooling effects. A working unit powered by at least one of the first generator and the second generator is provided to utilize the cooling effects from the cooling system.

Classifications:

International (IPC 8-9): B60K16/00 B60L8/00 F03G6/00 F25B27/02 (Advanced/Invention)
CPC: F03G6/00 F24F5/0007 F24F2005/0064 Y02E10/46 Y02T10/90
European: F03G6/00 F24F5/00C R24F5/00F9 Y02E10/46 Y02T10/90
US: 126/600 126/601 126/705 60/641.11 60/641.15 60/641.8 60/641.800P



Family:

Publication number	Publication date	Application number	Application date
CN1995870 A	20070711	CN200610129172	20060901
US2007084207 AA	20070419	US20050251474	20051014
US7437875 BB	20081021	US20050251474	20051014
US7905092 BA	20110315	US20080237393	20080925

Priority:

US20050251474 20051014 US20080237393 20080925

Probable Assignee: STRATEGIC DESIGN FEDERATION W INC

Assignee(s): (std): HACKNER SEAN ; ZUILI PATRICK

Assignee(s): STRATEGIC DESIGN FEDERATION W INC

Inventor(s): (std): ZUILI PATRICK ; SEAN ZUILI PATRICK HACKNER ; HACKNER SEAN

Inventor(s): ZUILI PATRICK HACKNER SEAN

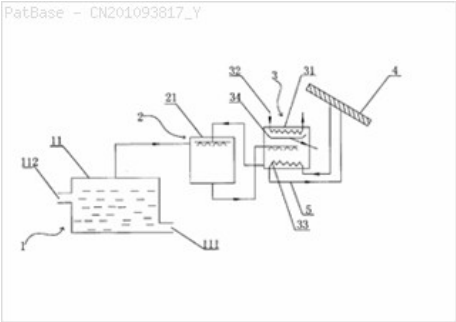
Agent(s): RADIOSHACK WILLIAM A LINNELL COUNSEL CORP; ZHENG JOE; JOE; WUXI SINO IP AGENCY

Title: Binary ice vacuum preparing system driven by solar energy

Abstract: Source: CN201093817Y The utility model relates to a binary ice preparation system, and has the technical points that a vacuum ice forming groove is adopted, water enters the vacuum ice forming groove from the lower part, and ice comes out of the upper part. A water vapor absorption device is utilized for spraying liquid absorbent to absorb water vapor, and the vacuum degree of the vacuum ice forming groove is kept. The absorbent which absorbs the water vapor adopts hot media of a solar heat collector for drying. The technology of the utility model is of a traditional method which changes flash evaporation with forming ice which is formed when vacuum ice forming droplets are sprayed in a vacuum tank. With utilizing a solar absorption system, a vacuum pump is only used once for air extraction, the vacuum degree of the vacuum ice forming groove can be kept, energy consumption is greatly reduced, and the problem which always troubles the development of vacuum ice formation is solved. The binary ice preparation system belongs to the technical field of new energy which utilizes solar energy and the technical field of the refrigeration.

Classifications:

International (IPC 8-9): F25C1/16 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
CN201093817 Y	20080730	CN200720073888U	20070821

Priority:

CN200720073888U 20070821

Probable Assignee: UNIV SHANGHAI MARITIME

Assignee(s): (std): SHANGHAI MARITIME UNIV ; UNIV SHANGHAI MARITIME

Assignee(s): SHANGHAI MARITIME UNIVERSITY

Inventor(s): (std): JIN YE ; LEILEI LU ; PEIYING YANG ; QINGQING SHENG ; XUELAI ZHANG

Inventor(s): YANG PEIYING ; YE JIN ; ZHANG XUELAI ; SHENG QINGQING ; LU LEILEI

Title: COAL BED GAS PRODUCED WATER DEEP TREATMENT EQUIPMENT

Abstract: Source: CN101786755A The invention discloses coal bed gas produced water deep treatment equipment which comprises a raw water tank; the raw water tank is communicated with a solar heat collector through a raw water pump; the water outlet of the solar heat collector is communicated with the raw water side of a hydrophobic membrane component; the outlet of the freshwater side of the hydrophobic membrane component is communicated with an exhaust pipe of a vacuum ejector, and a water production tank is communicated with a water inlet and outlet pipe of the vacuum ejector through a water production pump; and the outlet of the raw water side of the hydrophobic membrane component is communicated with an evaporation tank. The treatment equipment can most recover coal bed gas produced water resource and most reduce the emission of pollutant, solves the difficult problems of coal bed gas field explored domestic water supply and environment protection, is characterized by advanced and reliable process, high automation degree, light weight, and convenient movement and transportation, greatly reduces the environment pollution so that the water drainage meets the environment protection standards, uses natural and green solar refrigeration, effectively improves the temperature of the solution to be treated, improves the separation efficiency and effect, and simultaneously, saves energy and reduces the cost.

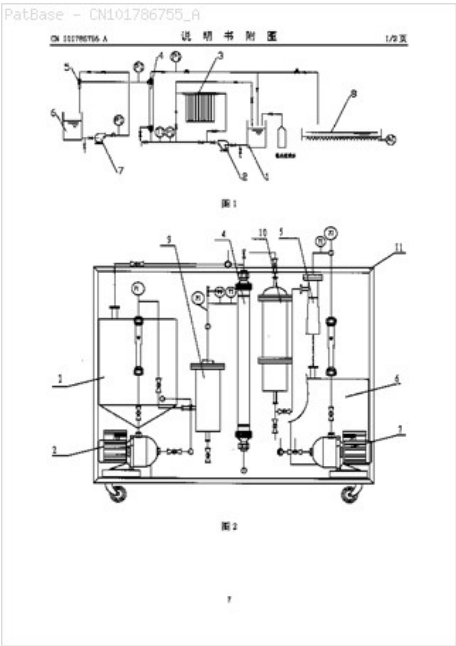
Classifications:

International (IPC 8-9): C02F9/10 (Advanced/Invention);

C02F103/10 (Advanced/Non-invention);

C02F9/08 (Core/Invention)

CPC: Y02W10/37



Family:

Publication number	Publication date	Application number	Application date
CN101786755 A	20100728	CN201010135648	20100330

Priority:

CN201010135648 20100330

Probable Assignee: JIANGSU XINGBANG ENVIRONMENTAL

Assignee(s): (std): JIANGSU XINGBANG ENVIRONMENTAL

Assignee(s): JIANGSU XINGBANG ENVIRONMENTAL PROTECTION ENGINEERING AND SCIENCE AND TECHNOLOGY CO

Inventor(s): (std): BAOLONG ZHAO ; HONGJUN JIANG ; PANXIN ZHANG ; QI ZHANG ; XIAOMEI DAI

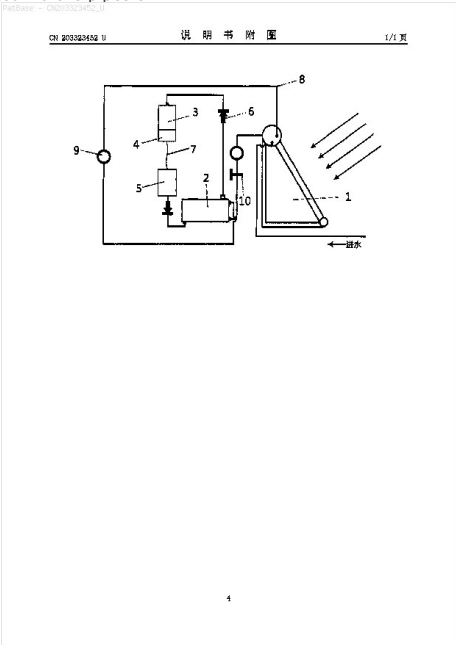
Inventor(s): ZHANG PANXIN ; ZHANG QI ; ZHAO BAOLONG ; JIANG HONGJUN ; DAI XIAOMEI

Title: SOLAR REFRIGERATION EQUIPMENT

Abstract: Source: CN203323452U The utility model discloses solar refrigeration equipment which is suitable for a small-sized feed and foodstuff storage chamber of a poultry farm, and is convenient to mount, less in investment, energy saving, and environmental-friendly. The solar refrigeration equipment is characterized by comprising a vacuum pipe solar heat collector 1, an absorption bed 2, a condenser 3, a liquid storage device 4, evaporation refrigeration equipment 5 and a pump 9 which are connected via pipes; a switch valve 10 is arranged between the vacuum pipe solar heat collector 1 and the absorption bed 2; an end-on check valve 6 is arranged between the absorption bed 2 and the condenser 3; a throttle 7 is arranged between the liquid storage device 4 and the evaporation refrigeration equipment 5; the vacuum pipe solar heat collector 1, the absorption bed 2 and the pump 9 are connected via the pipes 8.

Classifications:

International (IPC 8-9): F25B27/00 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
CN203323452 U	20131204	CN201220720730U	20121225

Priority:

CN201220720730U 20121225

Assignee(s): (std): XINING TIANGU AGRICULTURE SICENCE AND TECHNOLOGY CO LTD

Assignee(s): XINING TIANGU AGRICULTURE SICENCE AND TECHNOLOGYCO

Inventor(s): (std): BAI HENGWEI