

Search history

Search PN=(WO2016201175) (Results 1)

1:

Search [SP]: 1. a method to refurbish a non-convective zone in a salinity gradient solar pond comprising the steps of: draining completely an upper convective zone and a lower convective zone from a salinity gradient solar pond utilizing a plurality of transfer units wherein only the non-convective zone remains in the salinity gradient solar pond storing the drained upper convective zone in a corresponding upper convective zone of at least one surrounding pond and the drained lower convective zone in a corresponding lower convective zone of the at least one surrounding pond refurbishing the non-convective zone of the salinity gradient solar pond and returning the upper convective zone and the lower convective zone from the at least one surrounding pond to the salinity gradient solar pond via the plurality of transfer units. 2. the method of claim 1 further comprising the step of: conditioning a lower part of the refurbished non-convective zone to enable a preferred gradient interface between the lower convective zone and the non-convective zone once the lower convective zone is returned to the pond being refurbished and partially mixes with the cooler, refurbished non-convective zone. 3. the method of claim 1 further comprising the step of: creating an sgsp array comprising: at least two salinity gradient solar ponds, wherein one or more of a surrounding solar ponds in the sgsp array serves to store the lower and upper convective zone of the solar pond being refurbished thereby minimizing a requisite freeboard in the array of surround ponds and a transfer time of the lower and upper convective zones. 4. the method of claim 1, wherein each transfer unit comprises at least one device selected from the group consisting of: a plurality of hoses, a plurality of pipes, and a plurality of pumps. (Results 0)

Search [SP]: cross reference to related application this application takes priority from and claims the benefit of u.s. provisional patent application ser. no. 62/010,576 filed on jun. 11, 2015, the contents of which are herein incorporated by reference. background of the invention field of the invention the present system and method relates generally to the practice of maintaining the salinity gradient in a salinity gradient solar pond (sgsp), and more particularly to a system and method to refurbish the non-convective zone in a sgsp. description of the related art an sgsp is a shallow, salt-gradient pond that enables the collection and storage of solar thermal energy (see fig. 1). in the sgsp, solar energy is absorbed by the pond's bottom which in turn heats the adjacent salt-saturated fluid (the "lower convective zone", or lcz, in fig. 1). since the lcz is heavier than the layers above it due to its higher salinity, the heated fluid cannot rise in the pond and cool, like a normal pond, but rather remains on the bottom, getting hotter as it stores more solar thermal energy. over time, typically several months from initial construction, as the lcz stores more and more solar thermal energy, the brine temperature will approach boiling. this collected and stored solar thermal energy may be withdrawn (pumped hot brine) as process heat which may be used to generate electricity using an off the shelf, low-temperature heat engine. the sgsp may collect and store heat, and deliver power at an average, uniform rate (base-load), or it may deliver power on an as needed basis (on-demand) giving distribution control of the power output rather than being forced to produce power solely when the wind blows or the sun shines, making sgsp systems many times more effective than intermittent renewables. the sgsp systems may be easily constructed over large areas. summary of the invention the instant system and method, as illustrated herein, is clearly not anticipated, rendered obvious, or even present in any of the prior art mechanisms, either alone or in any combination thereof. thus the several embodiments of the instant system and method are illustrated herein. the present system and method, a pond rolling method, provides an efficient means for practicing gradient maintenance in a salinity gradient solar pond (sgsp) power system. the pond rolling method is more efficient than previously practiced methods for sgsp gradient maintenance, e.g., the surface wash method, and that improved efficiency is essential for the commercial practice of sgsp power systems. the commercialization of the sgsp technology is vital to the renewable energy industry, particularly as intermittent renewables are leading to grid management issues and increased costs. the sgsp systems collect and store heat, and are able to deliver power at an average, uniform rate (base-load), or on an as needed basis (on-demand) giving distribution control of the power output rather than being forced to produce power solely when the wind blows or the sun shines. this feature, along with other synergistic benefits which good earth mechanics, llc (gem) has developed (e.g., large-scale salt sink for environmental remediation), make sgsp systems many times more effective than intermittent renewables. the gem team is presently engaged in the commercial launch of their sgsp technology and the disclosed invention herein is crucial to that commercial launch. the pond rolling method, along with the previously disclosed falling pond system and practice to enable the falling pond method, gives gem positive control of the salinity gradient for commercial practice of the sgsp technology. good earth mechanics, llc (gem) is commercializing the sgsp technology. the gem sgsp team is comprised of the principals who operated the longest running sgsp engineering development and pilot demonstration in the world to date (university of texas, el paso) from 1985 to 2002 (advancements in salinity gradient solar pond technology based on 16 years of operational experience, huanmin lu, andrew h. p. swift, herbert d. hein, jr., john c. walton j. solar energy eng., v. 126, p. 759-767, may 2004). gem will build and deploy the sgsp systems using its 250 kw commercial module, which uses two pond units for each module (see fig. 2). the ponds are bermed impoundments versus excavated holes, where the dirt from the pond centers is used to form the berms. the gem sgsp systems are modularly extensible: the gem sgsp power system site can be as small as 250 kw, or scaled up to hundreds of mw's, by simply adding more sgsp modules. a cutaway of the gem sgsp system in fig. 2 shows how a typical off-the-shelf, low-temperature organic rankine cycle (orc) heat engine circulates both the pond's hot bottom brine and cool surface water. the hot brine is the thermal source and the cool water serves as the orc heat sink it's the temperature difference between the bottom and the top of the sgsp system that drives the heat engine. due to the salinity stratification in the sgsp the upward diffusion of salt is a natural consequence. this upward diffusion of salt has been found to be in the range of 60-80 gr/m2/day (tabors, h. solar ponds, solar energy, v. 27 (3), pp. 181-194, 1981 and v. 30 (1), pp. 85-86, 1983). controlling the salinity gradient in sgsp systems is vital to their reliable and efficient operation. the method for controlling the salinity gradient disclosed in this application, coined the "pond rolling method" by the authors, enables the solar pond's upper and lower zones to be rapidly drained and stored in the corresponding zones of the surrounding ponds in the sgsp array (see fig. 2) this minimizes the heat and water loss while efficiently utilizing the land allocated for the sgsp array. the available freeboard in the array's ponds is designed to allow for this periodically added volume, e.g., the freeboard within the array is designed for an extra ? the volume of each of the upper and lower zones, in addition to the nominal freeboard to retain wind-induced wave action (i.e. for the case where the upper and lower zones of the pond under repair is stored in the surrounding three ponds, or ? the added volume if stored in the surrounding five ponds, etc.). the modularity of the sgsp array, proposed for commercial practice by gem, is key to the practice of the pond rolling method. once the pond's upper and lower zones have been pumped away, leaving only the gradient zone in the pond under repair, the gradient zone may be refurbished (procedures for doing this refurbishment are discussed under "disclosure of invention"). after the gradient zone has been refurbished, the volumes for the lower and upper zones are returned from the surrounding ponds. by storing the lower zone of the pond under repair in the hot lower zones of the surrounding ponds, the heat losses are minimized. likewise storing the upper zone in the surrounding ponds minimizes water loss. in the pond rolling method the salt in the pond is allowed to diffuse upward over time and the method is used as needed to restore the gradient. other methods used for controlling the sgsp gradient include the surface wash method depicted in fig. 3. in the surface wash method the salt is allowed to diffuse upward to the surface layer. as the surface layer gets saltier, it is replaced with fresh water, or "washed". the displaced salty surface water is evaporated to concentrated salt brine in a separate evaporation pond and then returned to the sgsp bottom. this method, while workable for sgsp demonstration work and the typical gradient maintenance practice heretofore, is not practical for large scale sgsp commercialization due to the additional land requirement and the higher water and heat losses required to practice the method. the pond rolling method is superior as it minimizes water, heat loss, required land, and costs compared with the surface wash method. there has thus been outlined, rather broadly, a system and method relates generally to the practice of maintaining the salinity gradient in a salinity gradient solar pond (sgsp), and more particularly to a system and method to refurbish the non-convective zone in a sgsp in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. there are additional features of the invention that will be described hereinafter and which will form the subject matter of the claims appended hereto. in this respect, before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and to the arrangements of the components set forth in the following description or illustrated in the drawings. the invention is capable of other embodiments and of being practiced and carried out in various ways. also, it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting. these together with other objects of the invention, along with the various features of novelty, which characterize the invention, are pointed out with particularity in the claims annexed to and forming a part of this disclosure. for a better understanding of the invention, its operating advantages and the specific objects attained by its uses, reference should be made to the accompanying drawings and descriptive matter in which there are illustrated preferred embodiments of the invention. brief description of the drawings fig. 1 illustrates a perspective diagram of the basic workings of an exemplary salinity gradient solar pond (sgsp). fi (Results 0)

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Search SFT=((refurbish* or restor* or renovat* or repair*) and (solar w5 pond*)) and PD<20150611 (Results 107)

1) Family number: 10292000 (US4767539A)

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Title: Cleaning of hollow fiber filters utilized in lumenal gas flow

Abstract: A method of cleaning a filter having a plurality of elastic, porous hollow fibers with lumens within a shell or housing and in which filtration is carried out by applying a liquid suspension feedstock to the outer surface of the fibers whereby a portion of feedstock passes through the walls of the fiber to be drawn from the fiber lumens as a filtrate or permeate, and a portion of the solids in the feedstock are retained on or in the pores of the fibers, with the non-retained solids being removed from the shell or housing with the remainder of the feedstock, said method entailing introducing a pressurized gas into the fiber lumens which passes through the walls of the fibers to dislodge the retained solids, the gas being applied at a pressure which is sufficient to overcome the effect of the surface tension of the continuous phase of the feedstock within the pores of the membrane.

Classifications:

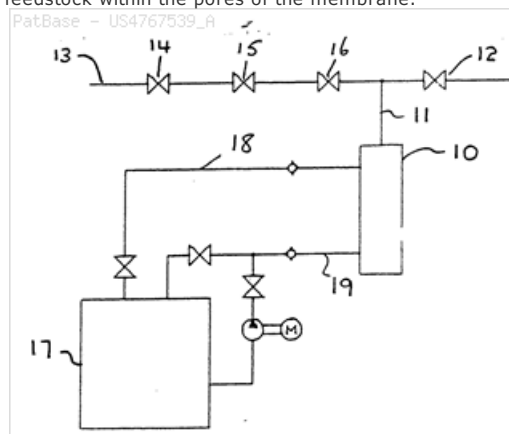
International (IPC 8-9): B01D29/46 B01D29/62 B01D29/66 B01D61/00 B01D63/02 B01D65/02 (Advanced/Invention); B01D29/44 B01D29/62 B01D29/66 B01D61/00 B01D63/02 B01D65/00 (Core/Invention)

International (IPC 1-7): B01D13/00 B01D13/01 B01D29/38 B01D29/62 B01D31/00 B01D61/00 B01D65/02

CPC: B01D65/02 B01D2321/04 B01D2321/12 B01D2321/185

European: B01D65/02 L01D321/04 L01D321/12 L01D321/18B

US: 210/636 210/794



Family:

Publication number	Publication date	Application number	Application date
AT84243 E	19930115	AT19840903618T	19841002
AU198434400 A1	19850423	AU19840034400	19841002
AU563321 B2	19870702	AU19840034400	19841002
DE3486031 D1	19930218	DE19843486031	19841002
DE3486031 T2	19930506	DE19843486031T	19841002
EP0160014 A1	19851106	EP19840903618	19841002
EP0160014 A4	19870428	EP19840903618	19841002
EP0160014 B1	19930107	EP19840903618	19841002
JP1937041 C3	19950609	JP19840503680	19841002
JP6059393 B4	19940810	JP19840503680	19841002
JP61500011 T2	19860109	JP19840503680T	19841002
US4767539 A	19880830	US19870056908	19870603
WO8501449 A1	19850411	WO1984AU00192	19841002

Priority:

AU19830001662 19830930 AU1983PG01662 19830930 EP19840903618 19841002
 WO1984AU00192 19841002 AU19840034400 19841002 US19850755327 19850530

Probable Assignee: U S FILTER WASTEWATER GROUP INC

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Agent(s): HALFORDS IP
Designated states: AT AU BE CH DE FR GB JP LI NL SE US

2) Family number: 11298009 (WO0044467A1)

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Title: MULTIPLE EFFECT PLATE EVAPORATOR AND TRAY THEREFOR

Abstract: A multiple effect evaporator (11) consists of a stack (13) made up of a number of effects (#1, #2,...) each effect (15) in turn being made up of a plurality of horizontally disposed trays arranged in the form of stacked plates to form a heat exchanger. There is a plurality (A, B) of discrete group of effects having the same number of effects in each group. These groups (A, B) are physically interleaved and aligned in a sequential manner such that the first effect (#1A, #1B) of each of the groups is disposed in sequence, followed by the second effect (#2A, #2B) of each group, and so on until the last effect (#4A, #4B). Float valves (23) and vapour traps (25) are accommodated in the unused fluid passageways of another group of effects, providing for a compact arrangement. The trays are essentially square in plan and comprise three circular apertures at three of the four corners thereof and four substantially rectangular apertures along each of the sides thereof.

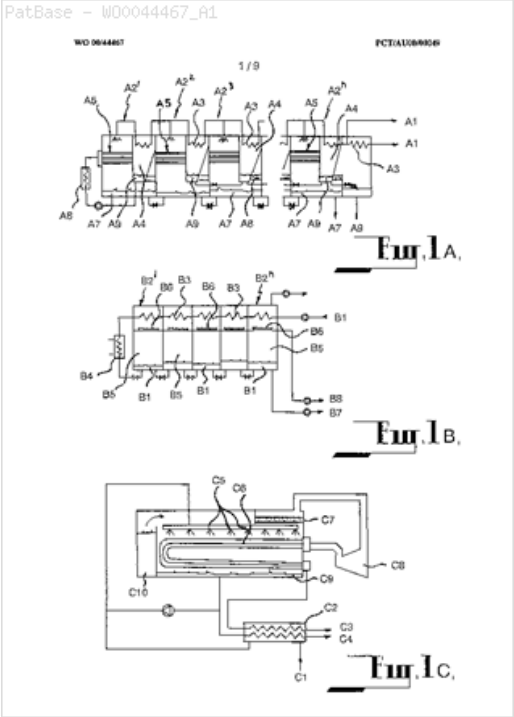
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International (IPC 1-7): B01D1/26 C02F1/06 F28F3/08 F28F3/12

CPC: B01D3/065 F28D9/005 Y02A20/128

European: B01D3/06B F28D9/00F4B



Family:

Publication number	Publication date	Application number	Application date
AU200026476 A1	20000818	AU20000026476	20000128
AU200026476 A5	20000818	AU20000026476D	20000128
AU840699 A0	19990225	AU1999PP08406	19990128
WO0044467 A1	20000803	WO2000AU00049	20000128

Priority:

AU1999PP08406 19990128 AU20000026476 20000128 WO2000AU00049 20000128

Probable Assignee: ATLANTIS WATER SYSTEMS AUSTRALIA LTD

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Inventor(s): (std): POSNANSKY HERNAN ARTURO

Inventor(s): HERNAN ARTURO POSNANSKY

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

3) Family number: 3244018 (US3891585A)

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Title: Elastomeric pavement repair composition for pavement failure and a method of making the same

Abstract: An elastomeric pavement repair composition for pavement failure and a method of preparation thereof comprising of paving grade asphalt and rubber. The asphalt is heated to an elevated temperature and the rubber is combined therewith. The resulting composition is mixed to form a hot jellied composition which can be applied to cracked or distressed pavements to repair the same.

Classifications:**International (IPC 8-9):** C08L95/00 E01C7/18

E01C7/26 (Advanced/Invention);

C08L95/00 E01C7/00 (Core/Invention)

International (IPC 1-7): B32B25/02 B32B25/06 B32B25/08 C08C11/68

C08C17/22 C08D9/00 C08J3/02 C08K5/00 C08L95/00

CPC: E01C7/187 E01C7/265 C08L95/00 Y10T428/20 Y10T428/25

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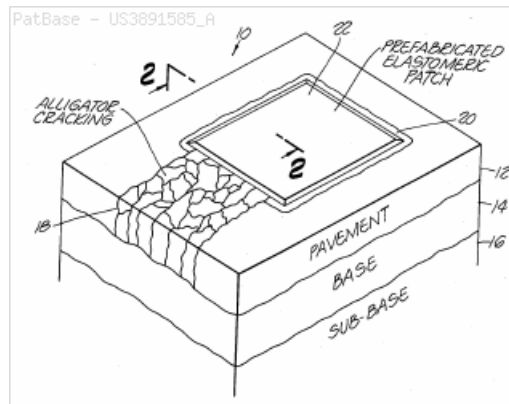
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European: C08L95/00 E01C7/18D E01C7/26C**US:** 404/32 404/44 404/72 404/74 404/92 427/138 427/140 427/204

428/323 428/332 428/338 428/491 428/492 428/496 428/521 428/63

521/44.5 521/47 523/172 523/307 524/570 524/574 524/575 524/577

524/59 524/70 524/71

**Family:**

Publication number	Publication date	Application number	Application date
US3891585 A	19750624	US19730376919	19730705
US3891585 B1	19891114	US19730376919	19730705
US3930100 A	19751230	US19730376920	19730705
US4069182 A	19780117	US19750544651	19750207

Priority:

US19660589190 19661021

US19730376919 19730705

US19730376920 19730705

Probable Assignee: MCDONALD CHARLES H**Assignee(s):** (std): MCDONALD CHARLES H**Assignee(s):** FIRST INTERSTATE BANK OF ARIZONA ; JACOBSON CARL C ; JACOBSON CARL C JR ; JOHNSON E J**Inventor(s):** (std): MCDONALD CHARLES H ; CHARLES H MCDONALD**4) Family number: 54949019 (US2015059129A)**

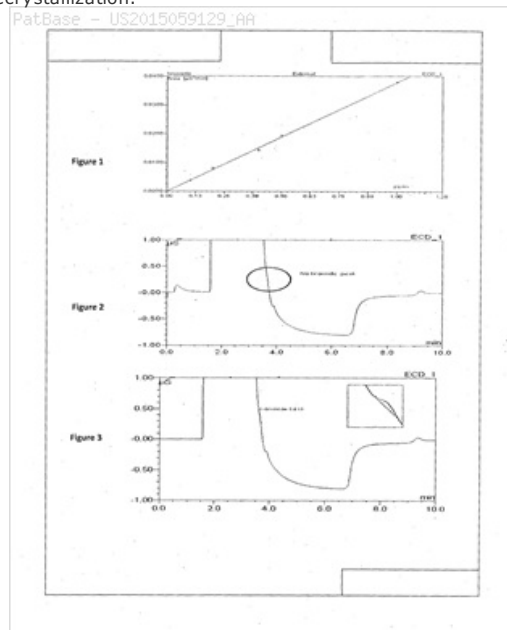
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Title: PRODUCTION OF HIGH PURITY SALT WITH REDUCED LEVELS OF IMPURITIES

Abstract: The invention discloses an improvement over the existing process of producing solar salt of high purity from seawater and minimizes the need for downstream purification. More particularly, the invention teaches the practical utility of recrystallization of salt in solar salt pans using seawater itself as the dissolving medium. The resultant recrystallized salt is obtained with a yield up to 80 percent and with much reduced levels of impurities. Special mention is made of the bromide level which is reduced 7-10 fold. The invention is most ideal for trace impurities which reside in the salt crystal lattice and are difficult to dislodge by conventional methods adopted for salt purification and where conventional recrystallization would be cost ineffective and scalability would pose a problem. The invention can be practiced by solar salt works based on seawater and where spare land is available to set up additional crystallizers required for the purpose of recrystallization.

Classifications:**International (IPC 8-9):** C01D C01D3/04 C01D3/06 C01D3/14 C01D3/16

C07C F24J2/00 (Advanced/Invention)

CPC: C01D3/06 C01D3/04 C01D3/14 C01P2006/80 Y02P20/134**US:** 1/1 23/2955**Family:**

Publication number	Publication date	Application number	Application date
AU2013245187 AA	20131010	AU20130245187	20130402
AU2013245187 BB	20160915	AU20130245187	20130402
CA2866777 AA	20140909	CA20132866777	20130402
CN104203825 A	20141210	CN201380018356	20130402

CN104203825 B	20160706	CN201380018356	20130402
EP2834193 A1	20150211	EP20130727659	20130402
EP2834193 B1	20170809	EP20130727659	20130402
IL234588 A0	20141030	IL20130234588	20130402
IN00597DE2012 A	20160831	IN2012DE00597	20120402
IN305780 B	20190118	IN2012DE00597	20120402
JP2015512365 T2	20150427	JP20150503993T	20130402
JP6106262 B2	20170329	JP20150503993T	20130402
MX2014011935 A1	20150413	MX20140011935	20130402
MX338892 B	20160504	MX20140011935	20130402
US2015059129 AA	20150305	US20130389418	20130402
US9090478 BB	20150728	US20130389418	20130402
WO13150546 A1	20131010	WO2013IN00217	20130402

Priority:

IN2012DE00597 20120402 WO2013IN00217 20130402

Probable Assignee: COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH

Assignee(s): (std): COUNCIL SCIENT IND RES

Assignee(s): GHOSH PUSHPITO KUMAR ; REBARY BABULAL ; UPADHYAY SUMESH CHANDRA ; MOHANDAS VADAKKE PUTHOOR ; SANGHAVI RAHUL JASVANTRAI ; COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH ; COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCHANUSANDHAN BHAWAN2 RAFI MARG110001NEW DELHIIN

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Agent(s): PHILLIPS ORMONDE FITZPATRICK; BERESKIN AND PARR LLP SENCRL SRL; HAMER CHRISTOPHER K; WESTMAN CHAMPLIN AND KOEHLER PA; BHATTACHARYYA GOUTAM ET AL

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

5) Family number: 1923022 (GB2155113A)

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Title: SHAPE MEMORY ALLOY POWER GENERATOR APPARATUS

Abstract: Power generator apparatus (25) includes a drive source in the form of a drive belt (18) made of a shape memory alloy, which is repeatedly deformed and restored due to the difference in temperature between low temperature fresh water from a fresh water layer (3) and a high temperature and high concentration solution from a regenerative layer (2) in a solar pond (5). Such repeated deformation and restoration causes a power generator (21) to be driven by rotation of pulleys (16, 17) carrying the belt (18) to produce electric power.

Classifications:

International (IPC 8-9): F03G6/00 F03G6/02

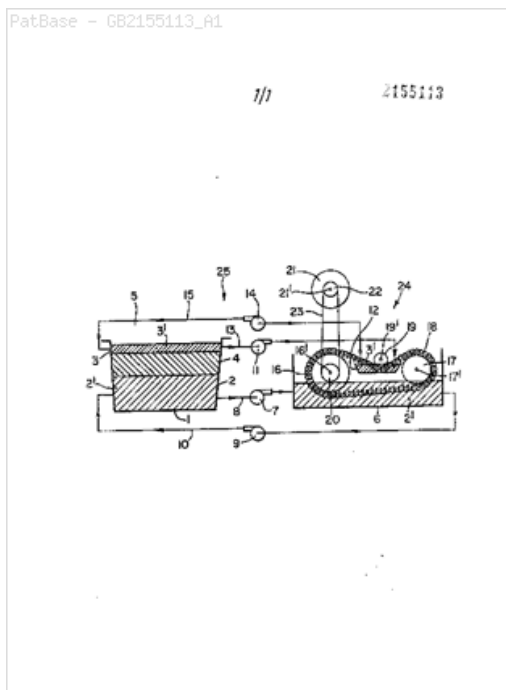
F03G7/06 (Advanced/Invention);

F03G6/00 F03G7/06 (Core/Invention)

International (IPC 1-7): F01K25/00 F03G7/02 F03G7/06 G06K9/68

CPC: F03G6/00 F03G7/065 Y02E10/46 Y02E10/44 F24S10/13

European: F03G6/00 F03G7/06B Y02E10/46



Family:

Publication number	Publication date	Application number	Application date
GB2155113 A1	19850918	GB19850003443	19850211

GB8503443 A0	19850313	GB19850003443	19850211
JP60166765 A2	19850830	JP19840023796	19840210

Priority:

JP19840023796 19840210

Probable Assignee: HITACHI SHIPBUILDING ENG CO

Assignee(s): (std): HITACHI SHIPBUILDING ENG CO

Assignee(s): HITACHI ZOSEN CORP ; HITACHI ZOSEN KK

Inventor(s): (std): SEINO KAZUO ; TAGUCHI MASAYASU ; KIYONO KAZUO

Inventor(s): MASAYASU TAGUCHI ; KAZUO SEINO

6) Family number: 11127043 (WO9811943A1)

© PatBase

Title: PERSONAL DOSIMETER OF NATURAL ELECTROMAGNETIC RADIATION WITH CENTRALISED RADIATION MEASUREMENT

Abstract: The invention concerns a personal dosimeter of natural electromagnetic radiation comprising at least one station for measuring (1) and transmitting the illumination value of the natural electromagnetic radiation located in a central point of a geographical zone, for transmitting by radio the illumination value to a plurality of personal dosimeter modules (2, Mj) each associated at least with one user, for establishing a radiation dose value absorbed for each user and to generate a warning signal based on parameters particular to each user. The invention is useful for preventing skin disorders caused by excessive exposure to the sun.

Classifications:

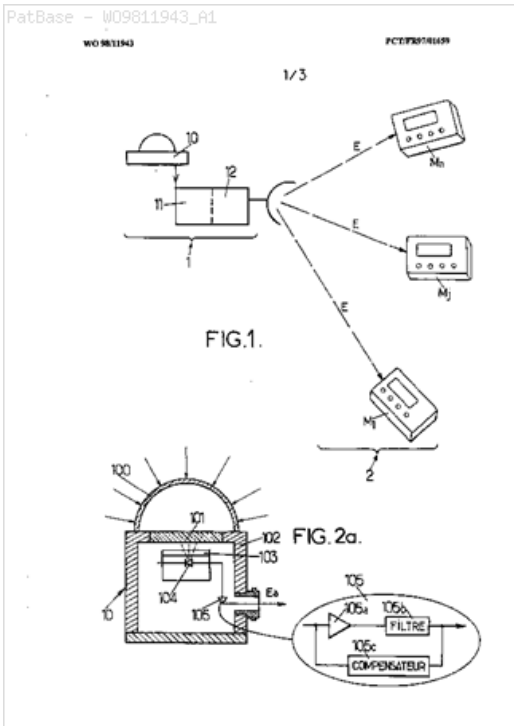
International (IPC 8-9): A61N5/00 (Advanced/Invention);

A61N5/00 (Core/Invention)

International (IPC 1-7): A61N5/00 G01J1/42

CPC: A61N5/00

European: A61N5/00



Family:

Publication number	Publication date	Application number	Application date
AU199743070 A1	19980414	AU19970043070	19970919
FR2753793 A1	19980327	FR19960011498	19960920
FR2753793 B1	19981204	FR19960011498	19960920
WO9811943 A1	19980326	WO1997FR01659	19970919

Priority:

FR19960011498 19960920 WO1997FR01659 19970919

Probable Assignee: UNIV LILLE SCIENCES TECH

Assignee(s): (std): UNIV LILLE SCIENCES TECH ; BOCQUET JEAN LOUIS

Assignee(s): DES SCIENCES ET TECHNOLOGIES DE LILLE UNIV ; DES SCIENCES ET TECHNOLOGIES DE LILLE USTL UNIV ; UNIVERSITE DES SCIENCES ET TECHNOLOGIES DE LILLE ; UNIVERSITE DES SCIENCES ET TECHNOLOGIES DE LILLE U ; UNIVERSITE DES SCIENCES ET TECHNOLOGIES DE LILLE USTL

Inventor(s): (std): BOCQUET JEAN LOUIS

Inventor(s): JEAN LOUIS BOCQUET

Designated states: AT AU BE CH DE DK ES FI FR GB GR IE IT JP LU MC NL PT SE US

7) Family number: 30045050 (US2002104804A)

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Title: METHODS OF UTILIZING WASTE WATERS PRODUCED BY WATER PURIFICATION PROCESSING

Abstract: The invention relates to disposing of unwanted waste waters produced from purifying water. The methods of the present invention include applying waste water containing 0.15 percent by weight of the salts of Na, K, Ca, Mg, Fe, Cl, SO₄, and CO₃ and mixtures thereof to soil to control dust, effect soil stabilization, seal ponds, inhibit root rot, and irrigate soil. The invention also relates to the utilization of waste waters within cooling towers and for laundry applications.

Classifications:

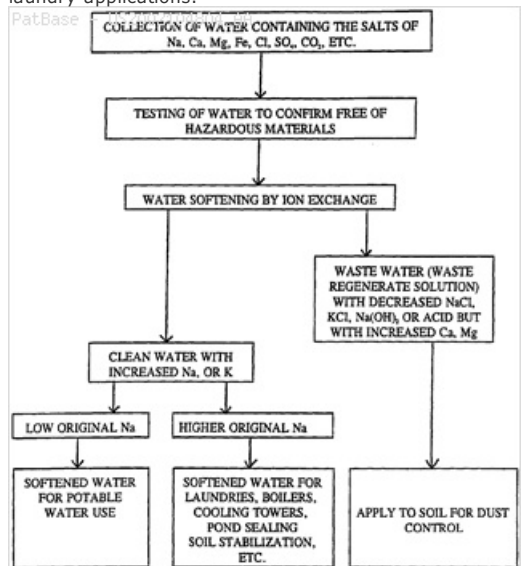
International (IPC 8-9): A01G25/00 A47B43/00 B01D15/04 C02F1/00 C02F1/02 C02F1/26 C02F1/42 C02F1/46 C02F1/461 C02F1/58 C02F3/00 C02F5/00 C09K17/02 C09K17/06 C09K17/40 C09K8/02 C09K8/03 C09K8/48 C09K8/58 E01C11/24 E01H5/00 E21B21/00 E21B21/06 E21B21/14 E21B33/13 E21B33/14 E21B43/00 E21B43/16 E21B43/40 G21F9/04 (Advanced/Invention); C02F1/68 C02F5/00 (Advanced/Non-invention); A47B43/00 C02F1/00 C02F1/42 C02F1/461 C02F1/58 C09K17/02 C09K17/40 C09K8/02 C09K8/42 C09K8/58 E21B21/00 E21B33/13 E21B43/00 E21B43/16 E21B43/34 (Core/Invention); C02F1/68 C02F5/00 (Core/Non-invention)

International (IPC 1-7): A01G1/00 A01G25/00 A47B43/00 B01D15/04 B01D17/06 C02F1/42 C02F5/00 C02F5/00 C09K17/02 C09K17/06 C09K17/40

CPC: B01J39/02 B01J39/14 B01J39/08 C02F1/4674 C02F1/52 C02F9/00 C02F2101/10 C05D1/005 C02F1/42 C02F1/68 C02F5/00 C02F2001/425 C02F2303/16 C02F1/76 C02F2303/04 C02F1/04 C02F1/14 C02F1/441 C02F1/461 C02F1/4693 C02F2103/06 C25B1/26 Y02W10/33 Y02P20/125 C09K17/02 B01J41/05 B01J41/07 B01J49/06 B01J49/53 C02F1/048 C02F2209/02 C02F2303/10 Y02W10/30 Y02A20/212 C09K3/185 C09K17/40

European: B01J39/02 B01J39/14 C02F1/42 C02F1/76 C02F5/00 C02F9/00 C05D1/00B C09K17/02 C09K17/40 C25B1/26 M02F1/04 M02F1/14 M02F1/42 M02F1/42D M02F1/44B M02F1/461 M02F1/467B2 M02F1/469D M02F1/52 M02F1/68 M02F101/10 M02F103/06 M02F303/04 M02F303/16 M02F5/00

US: 166/265 166/266 166/267 166/267S 166/285 166/292 166/292S 175/65 175/65S 175/66 175/66P 205/500 205/500P 205/502 205/502S 205/503 205/503S 205/510 205/510S 205/516 205/536 205/556 210/601 210/634 210/638 210/642 210/65 210/650 210/650S 210/66 210/660 210/670 210/681 210/687 210/702 210/702S 210/739 210/747 210/747.1 210/747.100S 210/747S 210/748 210/748.01 210/748.010S 210/748.16 210/748.17 210/748.2 210/748.200P 210/767 210/774 404/75 404/75P 405/15 405/258 405/302.4 405/302.6 422/186.04 422/22 422/26 422/27 47/58.10R 47/58.15C 47/58.1R 47/58.1SC 47/581R 507/145 507/145S 507/904 507/904S



Family:

Publication number	Publication date	Application number	Application date
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AU2006227707 AA	20060928	AU20060227707	20060315
AU2006227707 BB	20120209	AU20060227707	20060315
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DE69911123 T2	20040527	DE19996011123T	19990705
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IN07072DN2007 A	20071012	IN2007DN07072	20070913
PT971014 T	20040227	PT19990305312T	19990705
US2002104804 AA	20020808	US20010849453	20010504
US2004118042 AA	20040624	US20030706341	20031111
US2005210745 AA	20050929	US20050081576	20050316
US2007102154 AA	20070510	US20060643477	20061221
US2008063474 AA	20080313	US20070980005	20071030
US2008128366 AA	20080605	US20070978891	20071030
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US2008164218 AA	20080710	US20070978890	20071030
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US2009065259 AA	20090312	US20080286221	20080929
US2011255917 AA	20111020	US20100961415	20101206
US2012061315 AA	20120315	US20110248679	20110929
US6071411 A	20000606	US19980110789	19980706
US6374539 BA	20020423	US20000565735	20000505
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US7622044 BB	20091124	US20080082044	20080407
US7717173 BB	20100518	US20060643477	20061221
US7771600 BB	20100810	US20060885852	20060315
US7823641 BB	20101102	US20080286139	20080929
US7866916 BB	20110111	US20070980005	20071030

US7947185 BB	20110524	US20070978890	20071030
US8062532 BB	20111122	US20080231128	20080829
US8091653 BB	20120110	US20080286221	20080929
US8192633 BB	20120605	US20070978891	20071030
US8210768 BB	20120703	US20100961415	20101206
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Priority:

US19980110789	19980706	CA19992276660	19990630	US20000565735	20000505
US20010849453	20010504	US20030706341	20031111	US20050081576	20050316
US20060885852	20060315	WO2006US09270	20060315	US20060643477	20061221
US20070980005	20071030	US20070978891	20071030	US20070978890	20071030
WO2007US25812	20071217	US20080082044	20080407	US20080231128	20080829
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US20110248679	20110929				

Probable Assignee: ECYCLING LLC

Assignee(s): (std): ECYCLING LLC ; GROTT GERALD ; GROTT GERALD J ; GROTT GERALD JR

Assignee(s): GERALD GROTT ; GERALD J GROTT

Inventor(s): (std): GROTT GERALD JR ; GROTT GERALD J

Inventor(s): GERALD J GROTT ; GROTT GERALD

Agent(s): PATENT ATTORNEY SERVICES; BORDEN LADNER GERVAIS LLP; DAVID G DUCKWORTH DRUMMOND AND DUCKWORTH; DRUMMOND AND DUCKWORTH, SUITE 500; DRUMMOND AND DUCKWORTH SUITE 500; WILLIAM H DRUMMOND; DRUMMOND WILLIAM H; WILLIAM H; BARBARA J; LUTHER LAW FIRM PLC; FINN; LUTHER LAW FIRM; FINN T; SINORICA LLC; KENYON AND KENYON LLP

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

8) Family number: 57414072 (US2016030856A)

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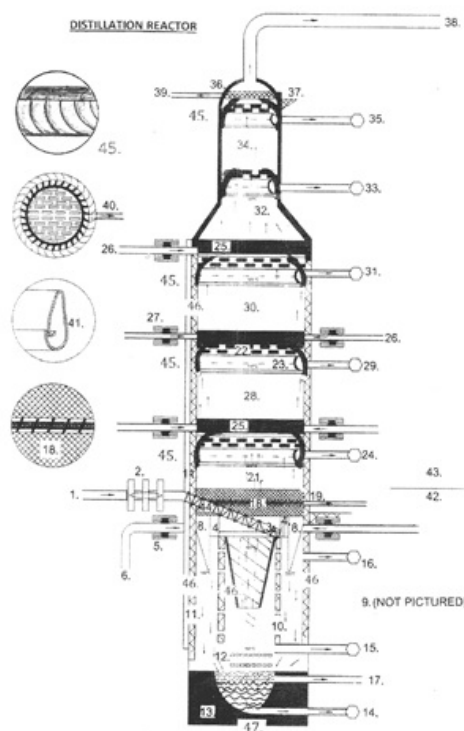
Title: DISTILLATION REACTOR MODULE

Abstract: The distillation reactor consists of a reactor apparatus with corresponding method of upstream distilling and purification of carbon based liquid or liquidized streams for use as fuels, lubricating oils and or gaseous energy and electricity production. The distillation reactor consolidates the atmospheric and vacuum distillation processes along with desalting, defueling, deasphalting, fractionation, thin/wiped film evaporation and Hydro finishing into an advanced high velocity, high volume single reactor system. Carbon based feed streams include either a single stream or preferably, a combined stream of liquefied coal slurries, crude oils, spent oils, Pyrolytic oils and or peat or other plant carbon derived liquids, vapors, mists or gases. The method further consists of controlling the mix ratio, flow velocity, sequential fractionation and filtration technology and processing atmospheres of the carbon feeds with the reactor apparatus. The combined apparatus and method allows for a refinery to consistently produce a finished barrel of oil well below traditional costs and at a higher efficiency than current art and prior art.

Classifications:

International (ipc 8-9): B01D3/00 B01D3/06 B01D3/10 B01D3/26 B01D3/32 B01D39/20 B01D53/48 B01D53/62 B01D59/04 B01J B01J19/24 B01J19/26 B01J2/00 B01J6/00 B01J8/24 B02C23/00 B03C1/00 B22F3/10 B22F9/00 B29B17/00 C01B17/02 C01B17/74 C02F1/00 C10B49/12 C10G1/00 C10G11/18 C10G33/00 C10G45/00 C10G57/00 C10G7/00 C10G7/06 C10G9/04 C10J3/72 C10L9/10 C22B13/00 C22B15/00 C22B21/00 C22B7/00 C22B9/00 F03G7/00 F27B17/00 G21C1/02 G21D5/00 H01M10/54 H01M8/00 H02K55/02 H02K7/09 (Advanced/Invention)
CPC: Y02E30/40 G21D1/00 B01J19/0093 B01J2219/00864 B01J2219/00867 B01J2219/00871 C01G21/02 C01B3/32 C01B13/02 C01B17/02 C01B2203/0205 C01B2203/0283 C01B2203/043 C01B2203/0445 C01B2203/0475 C10G1/02 C10G1/10 C10G31/08 C10G75/04 Y02P20/129 B09B5/00 Y02P30/446 Y02E30/30 B01D3/10 B01D3/006 B01D3/06 B01D39/2027 F03G7/00 B01D3/009 C10G7/06 G21C1/00 G21D5/00 C10G7/00 C10G57/00 C10G7/003 C10L9/10 C10J3/72 C10G1/00 C01B17/027 C01B17/74 B01J6/008 B01J2/00 B01J19/24 B01D53/48 B01D53/62 C22B9/00 F27B17/00 C02F1/00 C22B7/00 B29B17/00 B22F3/10 B22F9/00 C22B21/00 C22B15/00 C22B13/00 H01M8/00 H01M10/54 H02K55/02 H02K7/09 B02C23/00 B03C1/00 C10L2290/544 C10J2300/093 C10J2300/0946 B22F2009/001 C01B17/48 C10G11/18 C10G33/00 C10G45/00 Y02E20/16 Y02E20/18 Y02W10/33 Y02W10/37 Y02W30/84 C01B32/05 C01B32/20 C01B32/50 Y02P10/143
US: 196/46 202/232 209/213 210/251 241/301 241/65 266/160 310/90.5 422/129 422/170 422/187 422/198 422/255 423/522 423/567.1 429/49 505/163 505/166 60/698

PatBase - US2016030856_AA



Family:

Publication number	Publication date	Application number	Application date
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EP2969180 A2	20160120	EP20140762668	20140318
EP2969180 A4	20161005	EP20140762668	20140318
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US2016045841 A4	20160218	US20140776732	20140515
WO14146129 A2	20140918	WO2014US31118	20140318
WO14146129 A3	20150129	WO2014US31118	20140318
WO14153570 A2	20140925	WO2014US38290	20140515
WO14153570 A3	20150219	WO2014US38290	20140515
WO14153570 A9	20150806	WO2014US38290	20140515
WO14200605 A2	20141218	WO2014US31116	20140318
WO14200605 A3	20150326	WO2014US31116	20140318
WO14200605 A4	20150430	WO2014US31116	20140318
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Priority:

US20130800209P 20130315 US20130801170P 20130315 US20130801491P 20130315
US20140776734 20140318 US20140776736 20140318 WO2014US31118 20140318
WO2014US31116 20140318 US20140776732 20140515 WO2014US38290 20140515

Probable Assignee: TRANSTAR GROUP LLC

Assignee(s): (std): BRADLEY RANDALL ; KALPAN ALLEN ; KAPLAN ALLEN ; TRANSTAR GROUP LTD

Assignee(s): TRANSTAR GROUP LLC

Inventor(s): (std): KAPLAN ALLEN ; BRADLEY RANDALL ; KALPAN ALLEN

Agent(s): ADE AND CO INC; NELLIGAN OBRIEN PAYNE LLP; PERRONACE ANDREA; HERSHKOVITZ ABRAHAM ET AL;
HERSHKOTIZ ABRAHAM ET AL

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

9) Family number: 28577075 (US2003099731A)

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Title: FREEZE CONCENTRATION PROCESS

Abstract: The use of an improved method for freeze concentration is disclosed. The method provides for first freezing components of a pulpy slurry of morinda citrifolia. More dilute components are extracted after the initial freezing. A secondary freezing process at a lower temperature allows more concentrated portions of a morinda citrifolia slurry to be removed. Flavor and therapeutic oils remain in the resulting concentrate for improved flavor and health benefits.

Classifications:

International (ipc 8-9): A23L2/12 A61K36/746

B01D9/04 (Advanced/Invention);

A23L2/02 A61K36/185 B01D9/00 (Core/Invention)

International (ipc 1-7): A61K35/78

CPC: A23L2/12 A61K36/746 B01D9/04

European: A23L2/12 A61K35/78 A61K36/746 B01D9/04

US: 424/725 424/765 424/769 424/777 426/384

PatBase - US2003099731_AA

Patent Application Publication May 29, 2003 Sheet 1 of 3 US 2003/0099731 A1

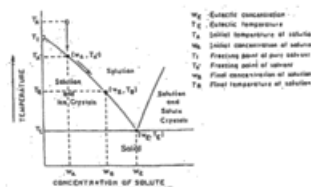
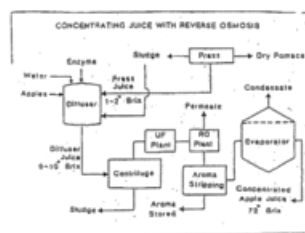


FIG. 1

Family:

Publication number	Publication date	Application number	Application date
US2003099731 AA	20030529	US20020044158	20020111
US6855354 BB	20050215	US20020044158	20020111

Priority:

US20010268305P 20010213 US20020044158 20020111

Probable Assignee: TAHITIAN NONI INT INC

Assignee(s): (std): JENSEN CLAUDE JARAKAE ; MORINDA INC ; OGDEN ROBERT V ; STORY STEPHEN P ; WEST BRETT J

Assignee(s): TAHITIAN NONI INT INC ; TAHITIAN NONI INT

Inventor(s): (std): JENSEN CLAUDE JARAKAE ; OGDEN ROBERT V ; STORY STEPHEN P ; WEST BRETT J

Agent(s): MICHAEL F; KIRTON AND MCCONKIE

10) Family number: 56783078 (US2014175001A)

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Title: AQUATIC REMEDIATION APPARATUS

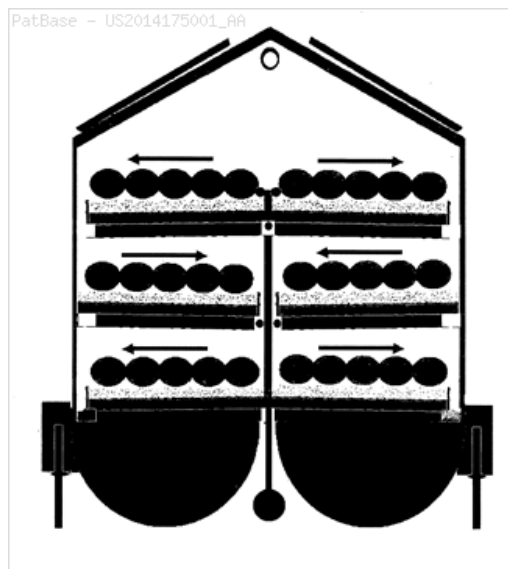
Abstract: A low power treatment device for the in-situ remediation of aquatic infrastructure is disclosed. Water is pumped up from the surface, directly, or indirectly trickled down through multiple elevated and cascaded stages containing bio-media, into the accumulation base of which is floating on the surface of a body of water. Clean water accumulated is automatically flushed released through a drain hose, aerating the bottom sediment, thereby biologically reducing, sludge buildup, pollution, and disrupting the stratified layers within the body of water with a minimal of turbidity. Water may be pumped up or flush released at any level within the body of water, thereby allowing the up and down skimming of surface for subsequent harvesting of surface vegetation and movement of water.

Classifications:

International (IPC 8-9): C02F11/02 (Advanced/Invention)

CPC: C02F11/02 C02F2103/007 C02F3/04 C02F2201/009 Y02W10/27 Y02W10/15 Y02A20/212

US: 210/242.1



Family:

Publication number	Publication date	Application number	Application date
US2014175001 AA	20140626	US20120726770	20121226

Priority:

US20120726770 20121226

Probable Assignee: WILLIS II LOREN EUGENE

Assignee(s): (std): WILLIS II LOREN EUGENE

Inventor(s): (std): WILLIS II LOREN EUGENE

11) Family number: 49769103 (US2011252801A)

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Title: COMPOSITIONS COMPRISING Z-1,2-DIFLUOROETHYLENE AND USES THEREOF

Abstract: The present invention relates to compositions for use in refrigeration, air-conditioning, and heat pump systems wherein the composition comprises Z-1,2-difluoroethylene (Z-HFO-1132a). The compositions of the present invention are useful in processes for producing cooling or heat, as heat transfer fluids, foam blowing agents, aerosol propellants, and power cycle working fluids.

Classifications:

International (IPC 8-9): B01F17/00 C08J9/06 C08J9/14 C09K3/00 C09K3/30 C09K5/04 F01K13/00 F01K25/08 F25B45/00 F25D31/00 F28D15/02 (Advanced/Invention);

B01F1/00 F25D31/00 (Advanced/Non-invention)

CPC: C09K5/045 C08J9/149 C08J2203/146 C08J2203/182 C09K3/30 C09K2205/11 C09K2205/12 C09K2205/122 C09K2205/126 C09K2205/134 C09K2205/22 Y02B30/52 C08J9/146 C08J2207/04 C09K5/044 B01F17/0085 F25B45/00 C09K2205/40 C09K2205/32 C09K2205/24 F25B2345/001 F25B2345/002 F01K25/08 C09K2205/43 C09K2205/42 C09K2205/47 Y02P20/124 Y02B30/12

European: C08J9/14H2F C08J9/14P C09K3/30 C09K5/04B4B M08J207/04 M09K205/110 M09K205/120 M09K205/122

M09K205/126 M09K205/134 M09K205/220 Y02B30/12B

US: 165/104.21 165/104.210S 252/182.12 252/182.120S 252/182.29 252/182.290S 252/3 252/67 252/67S 252/68 252/68P 252/68S 252/8 264/53 516/12 516/8 521/98 521/98S 60/645 60/645P 60/651 62/119 62/119S 62/324.1 62/467 62/77

Family:

Publication number	Publication date	Application number	Application date
US2011252801 AA	20111020	US20110086914	20110414
US2011253927 AA	20111020	US20110086893	20110414
US2015121873 AA	20150507	US20150596538	20150114
US2015121911 AA	20150507	US20150596586	20150114
US8961811 BB	20150224	US20110086893	20110414
US8961812 BB	20150224	US20110086914	20110414

Priority:

US20100324437P 20100415 US20100324442P 20100415 US20110086914 20110414
US20110086893 20110414 US20150596586 20150114 US20150596538 20150114

Probable Assignee: CHEMOURS CO FC LLC

Assignee(s): (std): DU PONT ; WATERLAND ROBERT L ; MINOR BARBARA HAVILAND

Assignee(s): JPMORGAN CHASE BANK NA ; CHEMOURS CO FC LLC ; CHEMOURS FC LLC ; E I DU PONT DE NEMOURS AND CO ; E I DU PONT NEMOURS AND CO ; E I DU PONT NEMOURS AND COMPANY ; E I DU PONT DE NEMOURS AND COMPANY

Inventor(s): (std): WATERLAND ROBERT L ; MINOR BARBARA HAVILAND

12) Family number: 7029103 (US4117886A)

© PatBase

Title: Oil shale retorting and off-gas purification

Abstract: Disclosed is a process for removing acidic impurities from off-gases generated in the retorting of oil shale comprising contacting a rubblized mass of oil shale which has been substantially depleted in hydrocarbonaceous materials with water, so as to extract basic components from the mass; and contacting off-gases, which were generated during the retorting of oil shale and which contain acidic impurities, with the water containing basic components so as to substantially remove said acidic impurities from said off-gases. Also disclosed is a process for the in situ retorting of oil shale and removal of acidic impurities from off-gases generated in the in situ or surface retorting of oil shale comprising forming a plurality of subterranean in situ oil shale retorts containing rubblized oil shale having a void space of about 5 to about 40 per cent; retorting a first subterranean in situ retort until the rubblized oil shale is spent and substantially depleted in hydrocarbonaceous material; injecting water into the spent retort so as to deplete the heat content of the retorted rubblized oil shale and to form steam; recovering and using said steam in the retorting of a second subterranean in situ oil shale retort; continuing to inject water into the spent first retort so as to extract basic components from the retorted rubblized oil shale; recovering said water containing basic components; and contacting off-gases generated during the in situ or surface retorting of oil shale, said off-gases containing acidic impurities, with said water containing basic components so as to substantially remove said acidic impurities from said off-gases.

Classifications:

International (IPC 8-9): B01D53/52 (Advanced/Invention);

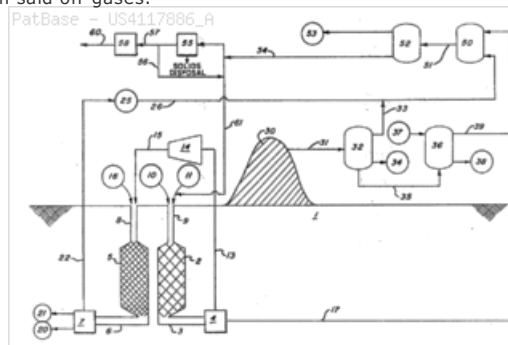
B01D53/48 (Core/Invention)

International (IPC 1-7): B01D53/34 E21B43/00 E21B43/24

CPC: B01D53/526

European: B01D53/52C

US: 166/259 166/261 166/267 208/428 208/435 299/2 423/220 423/243.08



Family:

Publication number	Publication date	Application number	Application date
US4117886 A	19781003	US19770834570	19770919

Priority:

US19770834570 19770919

Probable Assignee: STANDARD OIL CO INDIANA

Assignee(s): (std): STANDARD OIL CO INDIANA

Assignee(s): STANDARD OIL COMPANY INDIANA

Inventor(s): (std): HONAKER DONALD E

13) Family number: 5089118 (US4613409A)

© PatBase

Title: HIGH RATE SOLAR STILL AND PROCESS

Abstract: A method and apparatus for purifying raw feedwater. The raw feedwater is directed into an evaporator module submerged in a solar pond or other body of heated liquid. The evaporator module includes a rotating housing through which a plurality of spaced apart substantially horizontal open ended heat transfer tubes extend. A heating liquid is directed through the heat transfer tubes. The raw feedwater is distributed within the evaporator module so as to cause the feedwater to descend into heat transferring contact with the heat transfer tubes and thereby vaporize a portion of the feedwater. The vapor formed in the

evaporator module is withdrawn from the evaporator module and directed to a suitable condenser. A preferred embodiment of the evaporator module is disclosed which includes cavitation fins or urging the heated liquid through the evaporator module.

Classifications:

International (IPC 8-9): B01D1/04 B01D1/22 C02F1/14

C02F1/16 (Advanced/Invention);

B01D1/00 B01D1/22 C02F1/14 C02F1/16 (Core/Invention)

International (IPC 1-7): B01D1/00 B01D1/04 B01D47/16 B01J19/28

C02F1/04 C02F1/14 F28D11/04 F28D11/08

CPC: Y10S159/901 Y10S159/903 Y10S203/01 Y10S203/11 Y10S165/14

Y02W10/37 C02F1/16 B01D1/04 B01D1/228 C02F1/14 Y02E10/44

Y02A20/212 F24S10/13

European: B01D1/04 B01D1/22D4 C02F1/14 C02F1/16

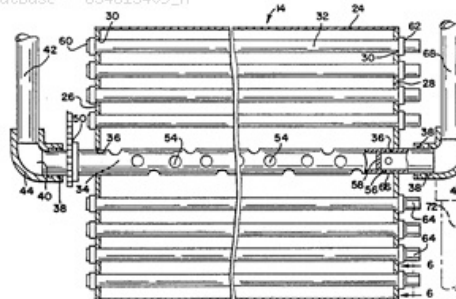
US: 126/415 126/561 126/636 159/11.2 159/12 159/26.1 159/901

159/903 165/88 165/DIG.140 202/172 202/175 202/233 202/234 202/237

202/238 203/10 203/100 203/DIG.1 261/87 422/201 422/209 435/298.2

435/299.1 435/312

PatBase - US4613409_R



Family:

Publication number	Publication date	Application number	Application date
EP0212291 A2	19870304	EP19860110021	19860721
EP0212291 A3	19880608	EP19860110021	19860721
US4613409 A	19860923	US19850766648	19850819
US4693304 A	19870915	US19860866876	19860523
US5132090 A	19920721	US19900521830	19900508

Priority:

US19850766648 19850819 US19860866876 19860523 US19870091600 19870831

Probable Assignee:

VOLLAND CRAIG S

Assignee(s): (std):

VOLLAND CRAIG S

Inventor(s): (std):

VOLLAND CRAIG S

Designated states:

DE FR GB NL SE

14) Family number: 3667128 (US4564367A)

PatBase

Title: SOLAR SALT CRYSTALLIZER AND PROCESS FOR PRODUCING SALT

Abstract: A solar crystallizer and a process for producing solar salt adaptable for use in climates heretofore believed unfavorable for solar salt production. The invention employs a solar crystallizer defining a shallow pond of salt solution the level of which is carefully monitored and controlled by withdrawing unsaturated solution from the upper stratum of the pond such as produced from rainfall and introducing substantially saturated brine into the pond at a lower stratum overlying the salt crop on the bottom thereof providing a continuous protective saturated brine layer and enhancing the efficiency of water evaporation by a comparatively shallow depth.

Classifications:

International (IPC 8-9): B01D1/00 B01D9/00 (Advanced/Invention);

B01D9/00 (Core/Invention)

International (IPC 1-7): B01D1/00 B01D9/02

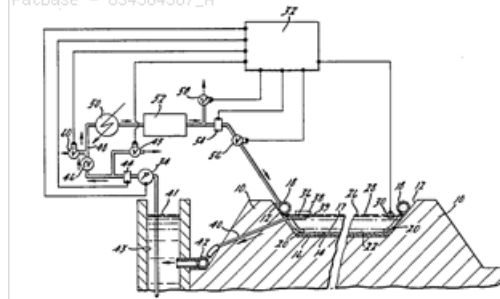
CPC: Y10S203/01 B01D9/0031

European: B01D9/00C6

US: 159/2 159/2.1 159/42 159/44 159/46 159/47.1 203/3 203/DIG.1

23/295S 23/300

PatBase - US4564367_A



Family:

Publication number	Publication date	Application number	Application date
CA1265433 A1	19900206	CA19850474669	19850219
US4564367 A	19860114	US19840622475	19840620

Priority:

US19840622475 19840620 CA19850474669 19850219

Probable Assignee:

DIAMOND CRYSTAL SALT CO ; INT SALT CO

Assignee(s):

INTERNATIONAL SALT COMPANY ; LEVERENZ MELVIN EARL ; INT SALT CO A CORP OF NJ ; DIAMOND CRYSTAL SALT COMPANY ; HEISS JOHN FREDERICK ; AKZO NOBEL SALT INC ; AKZO SALT INC ; CARGILL INC

Inventor(s): (std):

HEISS JOHN F ; LEVERENZ MELVIN E

Inventor(s):

LEVERENZ MELVIN EARL ; HEISS JOHN FREDERICK

Agent(s):

MACRAE AND CO

Title: Process to minimise the leaching of dissolved pollutant substances from a flooded quarry

Abstract: In a process to minimise the leaching of dissolved pollutant substances from a flooded quarry (lagoon) previously used as an open refuse tip for solid wastes, the deep floor zones within the resulting lagoon or flooded quarry are covered with a liquid layer(monimolimnion) of esp. brine (NaCl) whose density is higher than that of water.

Classifications:

International (IPC 8-9): B09B1/00 E02D31/00 (Advanced/Invention);

B09B1/00 E02D31/00 (Core/Invention)

International (IPC 1-7): B09B1/00 E02D31/00

CPC: B09B1/00 E02D31/00

European: B09B1/00 E02D31/00

Family:

Publication number	Publication date	Application number	Application date
DE19710937 A1	19980917	DE19971010937	19970315

Priority:

DE19971010937 19970315

Probable Assignee: BURMEISTER JAN

Assignee(s): (std): BURMEISTER JAN

Assignee(s): BURMEISTER JAN 06217 MERSEBURG DE

Inventor(s): (std): BURMEISTER JAN

Inventor(s): BURMEISTER JAN 06217 MERSEBURG DE

Title: HEAT STORAGE IN A POND CONTAINING A SATURATED AQUEOUS SALINE SOLUTION

Abstract: Installation and method for the storage of thermal energy and its supply when required. The thermal energy may be solar or be derived from industry. For storage a pond is used which holds an aqueous saline solution whose concentration and temperature decreases from bottom to top and which is saturated at each level at the temperature there prevailing. Solid solute is provided at the bottom of the pond. Heat extraction is effected from solution at the bottom region and may be effected by heat exchange within the pond or by withdrawal of solution from near the bottom of the pond subjecting the withdrawn solution to heat exchange outside the pond and returning the solution and precipitated solute to the pond.

Classifications:

International (IPC 8-9): F01K3/02 F24H7/00 F24J1/00 F24J2/00 F24J3/00 F28D20/00 (Advanced/Invention);

F01K3/00 F24J1/00 F24J2/00 F28D20/00 (Core/Invention)

International (IPC 1-7): B65G5/00 F01K17/02 F01K21/00 F23P

F24D11/00 F24H7/00 F24H7/04 F24J3/00 F24J3/02 F28D13/00 F28D21/00

CPC: F28D20/0043 F28D20/0039 F28D20/0069 F28D20/0082

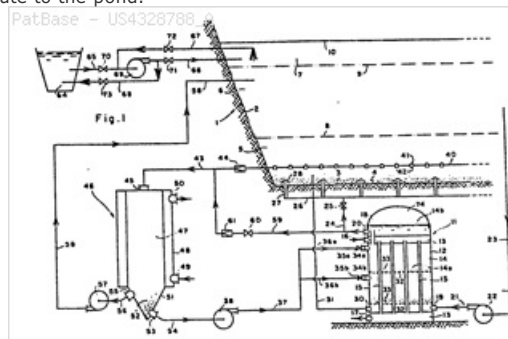
F28D20/0086 Y02E20/14 Y02E60/142 Y02E70/30 Y02P80/24 Y02E10/44

F24S10/13

European: F28D20/00C2 F28D20/00C4 R28D20/00T10 R28D20/00T4

R28D20/00T8 Y02E20/14 Y02E60/14B Y02E70/30

US: 126/400 126/415 126/561 126/567 126/641 165/104.31



Family:

Publication number	Publication date	Application number	Application date
AR231347 A1	19841031	AR19790276296	19790424
AU197946458 A1	19791108	AU19790046458	19790427
AU524027 B2	19820826	AU19790046458	19790427
BR7902567 A	19800311	BR19790002567	19790426
CA1111728 A1	19811103	CA19790325738	19790418
DE2960809 D1	19811203	DE19792960809	19790423
DK175379 A	19791031	DK19790001753	19790427
EP0008487 A1	19800305	EP19790300680	19790423
EP0008487 B1	19810916	EP19790300680	19790423
ES480022 A1	19800616	ES19790480022	19790427
GR64601 B	19800421	GR19790158904	19790414
IL54597 A0	19780731	IL19780054597	19780430
IL54597 A1	19810227	IL19780054597	19780430
IN151259 A	19830319	IN1979CA00405	19790421
JP54146035 A2	19791114	JP19790051583	19790427
MX148192 A	19830324	MX19790177482	19790430
NZ190231 A	19830215	NZ19790190231	19790419
PT69560 A	19790501	PT19790069560	19790427
TR20767 A	19820628	TR19790020767	19790430
US4328788 A	19820511	US19810241886	19810309
ZA7901763 A	19800430	ZA19790001763	19790412

Priority:

IL19780054597 19780430

CA19790325738 19790418

US19790031107 19790418

Probable Assignee: MELANED ABRAHAM

Assignee(s): (std): MELAMED A ; MELAMED ABRAHAM ; MCLAMED AVRAHAM ; MELAMED AVRAHAM ; WIRGUIN J M ; MELANED ABRAHAM ; WIRGUIN J ; WIRGUIN JOSEPH M ; WIRGUIN JOSEPH MENACHEM

Assignee(s): WIRGUIN JM AND MELAMED A ; MENACHEM WIRGUIN JOSEPH ; SOLMAT SYSTEMS LTD AN ISRAEL CO ; SOLMAT SYSTEMS LTD ; WIRGUIN J M AND MELAMED A ; JOSEPH MENACHEM WIRGUIN ; ABRAHAM MELAMED ; AVRAHAM MELAMED

Inventor(s): (std): JIYOSEFU MENAKEMU WAAGIN ; MELAMED A ; MCLAMED AVRAHAM ; WIRGUIN JOSEPH MENACHEM ; MELAMED AVRAHAM ; WIRGUIN JOSEPH M ; WIRGUIN J M ; WIRGUIN J ; ABURAHAMU MERAMETSUDO

Inventor(s): AVRAHAM MELAMED ; JOSEPH MENACHEM WIRGUIN

Agent(s): SWABEY OGILVY RENAULT; REINHOLD COHN AND PARTNERS

Designated states: BE CH DE FR GB IT NL SE

17) Family number: 12776140 (US5555877A)

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Title: COVER FOR POND USED TO COLLECT SOLAR RADIATION

Abstract: A cover for withstanding stormy weather and increasing solar heating of a body of water is disposed over the surface of the water. The cover is more transparent to visible radiation from the sun than to infrared radiation, and is anchored and sealed around its periphery over the surface of the body of water. Means are provided for reducing the pressure between the bottom of the cover and the top of the water to subatmospheric, and for flooding the top surface of the cover with a layer of water, and draining the layer of water from the top of the cover.

Classifications:

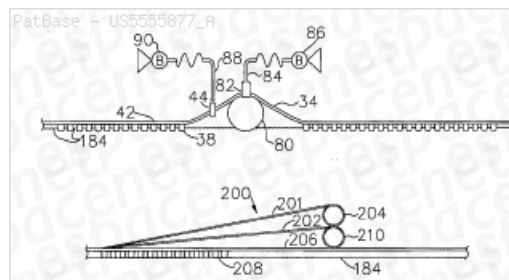
International (IPC 8-9): F24J2/04 (Advanced/Invention); F24J2/04 (Core/Invention)

International (IPC 1-7): F24J2/42

CPC: F24S10/17 Y02E10/44

European: F24J2/04C4 Y02E10/44

US: 126/561 126/565 126/566 126/568 4/498 4/499 4/503 4/507 4/508



Family:

Publication number	Publication date	Application number	Application date
US5555877 A	19960917	US19930049684	19930416

Priority:

US19930049684 19930416

Probable Assignee: LOCKWOOD GEORGE S

Assignee(s): (std): LOCKWOOD GEORGE S

Assignee(s): LOCKWOOD GEORGE S CARMEL CALIFORNIA ; LOCKWOOD GEORGE S CARMEL VALLEY CALIFORNIA ; LOCKWOOD GEORGE S PO BOX

Inventor(s): (std): BETHUNE JOHN K ; LOCKWOOD ANDREW W ; LOCKWOOD GEORGE S

18) Family number: 32280156 (DE102005011016A1)

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Title: ROTARY DRIVE AND/OR MOTOR FOR INVASIVE AND/OR EXPANSIVE DRIVE ARRANGEMENT HAS CENTRAL OR PERIPHERAL ROTATION BODY SUPPORTED BY CENTRAL AXLE OR SHAFT OR BY OUTER RING OR BAR, ACTION AND REACTION BODY WALL LYING OPPOSITE ROTARY BODY

Abstract: The rotary drive and/or motor has a central rotation body that is supported by a central axle or shaft or a peripheral rotation body that is supported by an outer ring or bar and that is provided for driving and/or rotation. There is also an action and reaction body wall lying opposite the rotation body.

Classifications:

International (IPC 8-9): E03B1/00 F01D1/02 F01D1/04 F15D1/00 (Advanced/Invention); E03B1/00 F01D1/00 F15D1/00 (Core/Invention)

International (IPC 1-7): F15D1/00

CPC: F01D1/02 F01D1/026 F01D1/34 E03B1/00 E03C2201/40

European: E03B1/00 F01D1/02 F01D1/02D F01D1/34 P03C201/40

Family:

Publication number	Publication date	Application number	Application date
DE102004013179 A1	20051006	DE200410013179	20040317
DE102005011016 A1	20060914	DE200510011016	20050310

Priority:

DE200410013179 20040317

DE200510011016 20050310

Probable Assignee: MEYER FLORIAN

Assignee(s): (std): MEYER FLORIAN

Title: ENERGY GENERATION SYSTEM

Abstract: An energy generation system includes a motive fluid which is alternately heated and cooled to drive a heat engine. An inexpensively built and operated system heats the motive fluid with solar radiation and cools it with atmospheric or wind cooling. Low cost solar heat collectors are fabricated with aluminum foil or aluminized Mylar reflective surface overlying parabolically shaped paperboard bases. Low cost fluid cooling devices are fabricated from various fluid carrying porous canvas bags, some being provided with wind catching devices.

Classifications:**International (IPC 8-9):** F03G6/06 F24J2/04

F24J2/14 (Advanced/Invention);

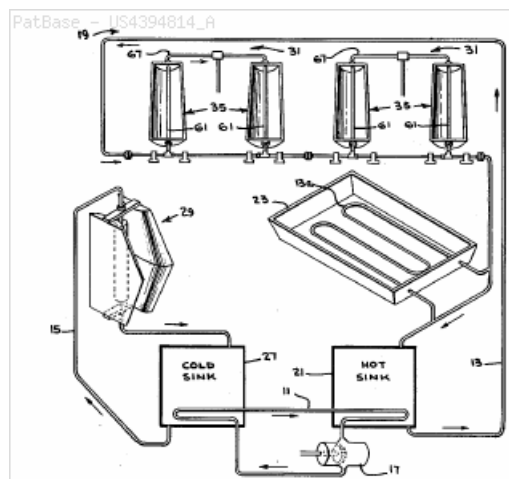
F03G6/00 F24J2/04 F24J2/06 (Core/Invention)

International (IPC 1-7): F03G7/02**CPC:** F24S10/13 F24S23/74 F03G6/06 Y02E10/44 Y02E10/45 Y02E10/46**European:** F03G6/06 F24J2/04C2 F24J2/14 Y02E10/44 Y02E10/45

Y02E10/46

US: 126/415 126/424 126/448 126/561 126/600 126/663 126/690

60/641.15 60/641.8 60/659 62/315

**Family:**

Publication number	Publication date	Application number	Application date
US4394814 A	19830726	US19810249908	19810401

Priority:

US19810249908 19810401

Probable Assignee:

ADAMS JAMES Y

Assignee(s): (std):

ADAMS JAMES Y ; WARDMAN JOHN C

Inventor(s): (std):

ADAMS JAMES Y ; WARDMAN JOHN C

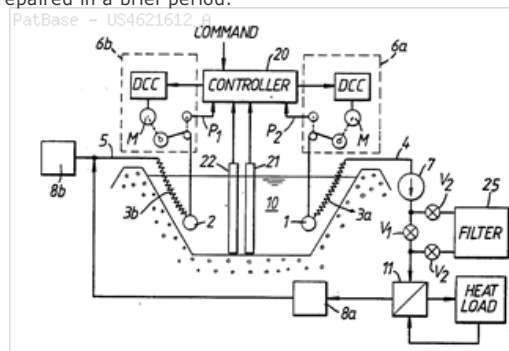
Title: SOLAR POND AND METHOD OF ESTABLISHING THE SAME

Abstract: A solar pond of large scale comprises an intake and a return outlet which are not fixedly disposed but are movable in the direction of water depth. The intake and the return outlet are connected through a saline water circulation loop in which necessary saline concentrations with respect to water depths of the solar pond can be efficiently obtained. This allows a solar pond with a specified saline concentration gradient to be established and repaired in a brief period.

Classifications:**International (IPC 8-9):** F24J2/00 F24J2/04 (Advanced/Invention);

F24J2/00 (Advanced/Non-invention);

F24J2/00 F24J2/04 (Core/Invention)

International (IPC 1-7): F24J2/00 F24J2/34 F24J3/02**CPC:** F24S10/13 Y02E10/44**European:** F24J2/04C2 Y02E10/44**US:** 126/400 126/415 126/561 126/567 126/572 126/597**Family:**

Publication number	Publication date	Application number	Application date
AU198546635 A1	19860327	AU19850046635	19850826
AU568951 B2	19880114	AU19850046635	19850826
JP1847418 C3	19940607	JP19840176572	19840827
JP5057500 B4	19930824	JP19840176572	19840827
JP61055550 A2	19860320	JP19840176572	19840827
US4621612 A	19861111	US19850768227	19850822

Priority:

JP19840176572 19840827

Probable Assignee: TOKYO SHIBAURA ELECTRIC CO**Assignee(s):** (std): TOKYO SHIBAURA ELECTRIC CO ; TOSHIBA CORP ; TOSHIBA KK**Assignee(s):** TOSHIBA K K ; KABUSHIKI KAISHA TOSHIBA

Inventor(s): (std): NAKAMOTO YASUNOBU ; NAKAMOTO YASUHATSU
Inventor(s): YASUNOBU NAKAMOTO
Agent(s): HALFORDS IP

21) Family number: 4000171 (US3906250A)

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Title: Method and apparatus for generating power utilizing pressure-retarded-osmosis

Abstract: A method and apparatus are described for generating power by utilizing pressure-retarded-osmosis. A first liquid having a relatively high osmotic pressure is introduced at a relatively high hydraulic pressure into a first pathway in which it contacts one face of a semi-permeable membrane, and a second liquid having a lower osmotic pressure is introduced at a lower hydraulic pressure into a second pathway in which it contacts the opposite face of the membrane. At every point in the two pathways, the hydraulic pressure difference between the liquids on the opposite faces of the membrane is maintained at a value which is less than the osmotic pressure difference between the liquids. Part of the second liquid passes by pressure-retarded-osmosis through the semi-permeable membrane, forming a pressurized mixed solution of greater volume than that of the first liquid introduced into the first pathway. The potential energy stored in the pressurized mixed solution is then converted into useful energy, such as electrical or mechanical power.

Classifications:

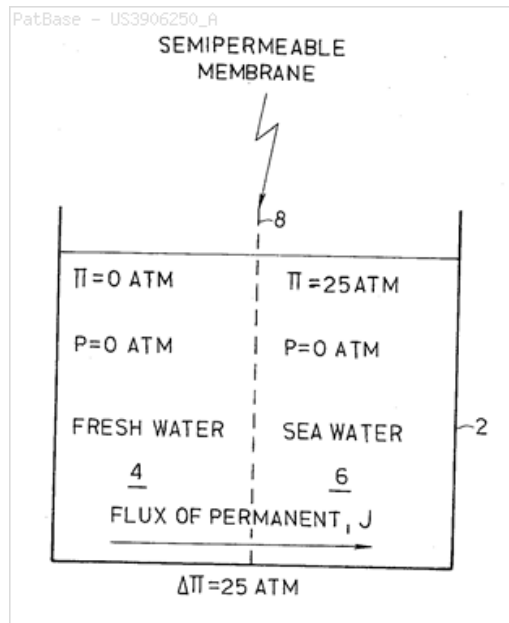
International (IPC 8-9): F03G7/00 F03G7/04 (Advanced/Invention);
F03G7/00 (Core/Invention)

International (IPC 1-7): B01D13/04 F03G7/04 F03G7/06

CPC: B01D61/002 F03G7/005

European: B01D61/00B F03G7/00C

US: 210/652 290/1 290/1.00R 290/1R 310/300 60/649 60/673



Family:

Publication number	Publication date	Application number	Application date
IL42658 A0	19731025	IL19730042658	19730703
IL42658 A1	19760831	IL19730042658	19730703
IL44799 A1	19770731	IL19740044799	19740510
US3906250 A	19750916	US19740480623	19740619

Priority:

IL19730042658 19730703 IL19740044799 19740510 IL19740042658 19740703

Probable Assignee: UNIV NEGEV

Assignee(s): (std): UNIV BEN GURION ; UNIV NEGEV AUTHORITY FOR R ; UNIV NEGEV AUTHORITY FOR RES A ; UNIV OF NEGEV AUTHORITY FO ; UNIV NEGEV ; UNIV OF THE NEGEV AUTHORITY FO

Assignee(s): UNIV OF THE NEGEV AUTHORITY FOR RES AND DEV ; UNIVERSITY OF THE NEGEV AUTHORITY FOR RES AND DEV ; BEN GURION UNIV OF NEGEV RESEARCH AND DEVELOPMENT AUTHORITY ; BEN GURION UNIVERSITY OF THE NEGEV AUTHORITY FOR RESEARC ; BEN GURION UNIVERSITY OF THE NEGEV RESEARCH AND DEVELOPMENT AUTHORITY ; SIDNEY LOEB

Inventor(s): (std): LOEB S ; LOEB SIDNEY

Inventor(s): SIDNEY LOEB

Agent(s): BENJAMIN J BARISH

22) Family number: 42900172 (US2009071064A)

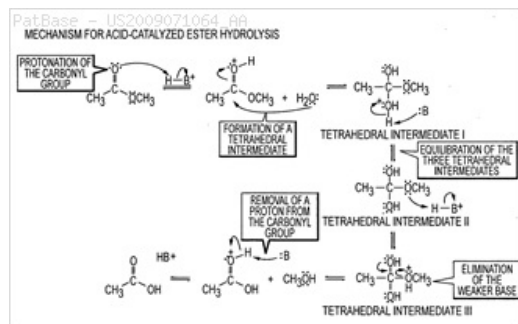
© PatBase

Title: CONTINUOUS ALGAL BIODIESEL PRODUCTION FACILITY

Abstract: Embodiments of the present invention concern methods, compositions, and apparatus for the continuous conversion of algal lipids into biodiesel. In some embodiments, the biodiesel is formed in a multi-step sequence, the first steps occurring in the presence of water and a strong acid wherein the lipids are released from the algae by means of mechanical and chemical action and are then hydrolyzed to free fatty acids. In a subsequent step, this free fatty acid mixture is reacted with methanol to generate fatty acid methyl esters (also known as biodiesel). Such methods produce biodiesel from algal lipids without the requirement for separate algal cell lysis or lipid extraction or purification prior to the acid catalysis sequence. In other embodiments, the multi-step acid catalysis sequence occurs at 100 degrees centigrade at two atmospheres of pressure.

Classifications:

International (IPC 8-9): C10L1/00 C10L1/18 (Advanced/Invention); C10L1/00 C10L1/10 (Core/Invention)
CPC: Y02P30/20 C10L1/026 C10G2300/1011 C11C1/08 C11C3/003 Y02E50/13
European: C10L1/02D C11C1/08 C11C3/00B M10G300/10B Y02E50/13
US: 44/308 44/308P



Family:

Publication number	Publication date	Application number	Application date
US2009071064 AA	20090319	US20080181217	20080728
WO09018230 A1	20090205	WO2008US71385	20080728

Priority:

US20070952443P 20070727 US20080181217 20080728

Probable Assignee: COLORADO STATE UNIV RESEARCH FOUNDATION

Assignee(s): (std): MACHACEK MARK ; MACHACEK MARK T ; SMITH THOMAS ; SOLIX BIOFUELS INC ; SMITH THOMAS GORDON ; UNIV COLORADO STATE RES FOUND

Assignee(s): COLORADO STATE UNIV ; COLORADO STATE UNIV RESEARCH FOUNDATION ; COLORADO STATE UNIVERSITY RESEARCH FOUNDATION

Inventor(s): (std): MACHACEK MARK ; MACHACEK MARK T ; SMITH THOMAS ; SMITH THOMAS GORDON

Agent(s): FAEGRE AND BENSON LLP,PATENT DOCKETING; FAEGRE AND BENSON LLP PATENT DOCKETING; FERNANDEZ BENJAMIN S

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

23) Family number: 43788177 (WO09117763A1)

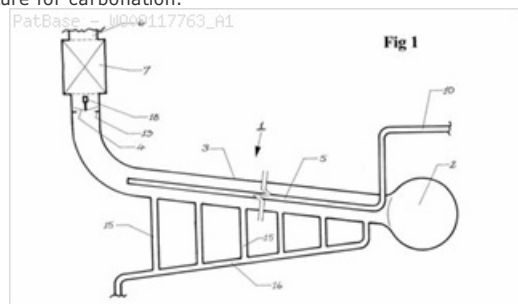
© PatBase

Title: CAPTURE OF CARBON DIOXIDE FROM FLUE GASES IN LARGE-SCALE ALGAE CULTIVATION

Abstract: A unit for the selective absorption into water of carbon dioxide from large volumes of flue gases or the direct absorption into water of large volumes of more or less pure gaseous carbon dioxide; said unit comprising one or more casings within which a large plurality of spray heads generate ultra-thin, fan-shaped sprays of water which are efficient absorbers of carbon dioxide; said carbon dioxide or flue gases being delivered to said casings via suitable trunks; said spray heads being supplied with pressurised water via suitable conduits; carbonated water draining away through suitable drainage lines, decompression wells and buffering units; said flue gases, stripped of carbon dioxide, discharging to exhaust stacks via pressure relief valves which maintain optimal carbonation pressure within said casings and optional water capture units; said carbon dioxide, flue gases and sorbent water being cooled to a suitable temperature for carbonation.

Classifications:

International (IPC 8-9): B01D47/00 B01D47/06 B01D53/14 B01D53/84 (Advanced/Invention); B01D47/00 B01D47/06 B01D53/14 B01D53/84 (Core/Invention)
CPC: Y02A50/2342 B01D53/1475 B01D53/185 B01D2257/504 B01D2259/124 Y02C10/06
European: B01D53/14H6 B01D53/18D L01D257/504 L01D259/12D Y02C10/06



Family:

Publication number	Publication date	Application number	Application date
AU2009227974 AA	20091001	AU20090227974	20090319
WO09117763 A1	20091001	WO2009AU00327	20090319

Priority:

AU20080901463 20080327 AU20090227974 20090319 WO2009AU00327 20090319

Probable Assignee: BIOSEQ PTY LTD

Assignee(s): (std): BIOSEQ PTY LTD ; VOWLES ROBERT WALTER

Inventor(s): (std): VOWLES ROBERT WALTER

Inventor(s): ROBERT WALTER VOWLES

Agent(s): BIOSEQ PTY LTD

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA

24) Family number: 54024186 (US2014315290A)

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Title: LOW-COST PHOTOBIOREACTOR

Abstract: The present invention provides a photobioreactor comprising at least one translucent flexible sheet shapable by a support assembly forming thereby an elongated channel adapted for biomass production therewithin. Kits for making a photobioreactor and a floatable photobioreactor are also provided.

Classifications:**International (IPC 8-9):** C12M1/00 C12M1/04 C12M1/12 C12M1/34

C12M1/38 C12M1/42 C12M3/00 C12M3/06 C12N1/12

C12P7/64 (Advanced/Invention);

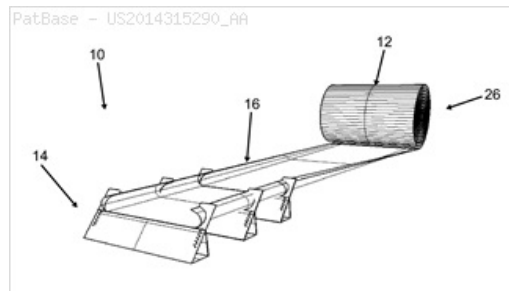
C12N1/12 C12P1/00 C12P7/64 (Advanced/Non-invention)

CPC: C12M23/48 C12M27/00 C12M27/20 C12M29/06 C12M31/02

C12M23/04 C12M23/18 C12M23/06 C12M35/02 C12M41/00 C12M23/46

C12M29/20 C12M31/00 C12M31/10 C12M27/16 C12M21/02 C12M23/22

C12M23/26 C12M41/10 C12M23/56 C12M23/38

US: 435/287.1 435/288.7 435/292.1**Family:**

Publication number	Publication date	Application number	Application date
AU2012350117 AA	20130613	AU20120350117	20121022
CA2761251 AA	20130607	CA20112761251	20111207
CA2764291 AA	20130716	CA20122764291	20120116
CA2858204 AA	20140604	CA20122858204	20121022
IN05129CN2014 A	20160212	IN2014CN05129	20140704
US2014315290 AA	20141023	US20120362904	20121022
WO13082713 A1	20130613	WO2012CA50750	20121022

Priority:CA20112761251 20111207 CA20122764291 20120116 WO2012CA50750 20121022
CA20122858204 20121022**Probable Assignee:** ALGABLOOM INT LTD**Assignee(s):** (std): INT LTD ; MOTTAAHEDEH SOHEYL ; MOTTAAHEDEH SOHEYL S M ; TREDICI MARIO R T R**Assignee(s):** MOTTAAHEDEH SOHEYL186 - 3105 DAYANEE SPRINGS BLVD.COQUITLAMB1V3E 0C2CA ; ALGABLOOM INT LTD ; MOTTAAHEDEH SOHEYL SM**Inventor(s):** (std): MOTTAAHEDEH SOHEYL ; MOTTAAHEDEH SOHEYL S M ; TREDICI MARIO R T R**Inventor(s):** MOTTAAHEDEH SOHEYL SM ; MOTTAAHEDEH SOHEYL186 - 3105 DAYANEE SPRINGS BLVD.COQUITLAMB1V3E 0C2CA**Agent(s):** PHILLIPS ORMONDE FITZPATRICK; NA; ROBIC; ROBIC LLP**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**25) Family number: 1366192** (US4006260A)

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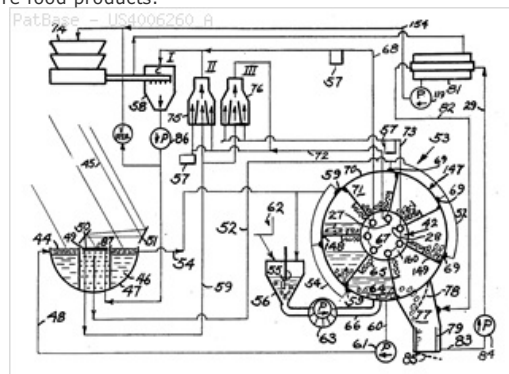
Title: METHOD AND APPARATUS FOR EVAPORATION OF MOISTURE FROM FRUIT AND VEGETABLE PARTICLES

Abstract: A method and apparatus for evaporating and condensing moisture from a procession of prepared fruit and vegetable particles at subatmospheric pressures, to manufacture puffed, low-moisture food products.

Classifications:**International (IPC 8-9):** A23B7/02 A23B7/12 A23L1/00 A23L1/325

A23P1/14 F26B7/00 (Advanced/Invention);

A23B7/02 A23B7/10 A23L1/00 A23P1/14 F26B7/00 (Core/Invention)

International (IPC 1-7): A23B7/02 A23L1/212 A23L1/325 A23L3/00 F26B13/30**CPC:** A23P30/32 F26B7/00 A23B7/02**European:** A23B7/02 A23L1/00P14B A23P1/14B F26B7/00**US:** 34/403 34/92 34/93 426/438 426/445 426/465**Family:**

Publication number	Publication date	Application number	Application date
CA1073730 A1	19800318	CA19760244520	19760129
JP51104054 A2	19760914	JP19760009933	19760129
US4006260 A	19770201	US19750544959	19750129
US4127947 A	19781205	US19760752254	19761220

Priority:

US19750544959 19750129

Probable Assignee: WEBB WILLIAM R

Assignee(s): (std): UERUZU EI UEBU ; WEBB WELLS A ; WEBB WILLIAM R

Inventor(s): (std): WEBB WELLS A ; WEBB WILLIAM R ; UIRIAMU AARU UEBU ; UERUZU EI UEBU

26) Family number: 36076203 (US2007217981A)

© PatBase

Title: PROCESSES AND SYSTEMS FOR THE SEQUESTRATION OF CARBON DIOXIDE UTILIZING EFFLUENT STREAMS

Abstract: Disclosed are processes and systems for sequestering carbon dioxide from a flue gas effluent from a parent process such as a coal-fired electric power plant. In one non-limiting embodiment of the invention, a mineral having a metal is dissolved with an acid to provide a solution having a predetermined pH. Carbon dioxide from the flue gas effluent and a base are added to the solution to provide a metal carbonate reaction to precipitate a metal carbonate, e.g., magnesium carbonate, from the solution. Heat, which may be supplied by the flue gas effluent, is used to power a base management system for recovering used base form the process.

Classifications:

International (IPC 8-9): B01D53/14 B01D53/62 C01F11/18

C01F5/24 (Advanced/Invention);

B01D53/14 B01D53/62 C01F11/00 C01F5/00 (Core/Invention)

CPC: Y02P20/152 B01D53/62 B01D53/1475 B01D2257/504 C01B13/36

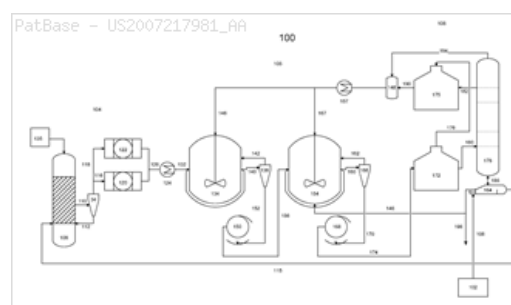
C01C1/28 C01F5/24 C01F11/18 C01F17/005 Y02C10/04 Y02C10/06

C01B32/60

European: B01D53/14H6 B01D53/62 C01B13/36 C01B31/24 C01C1/28

C01F11/18 C01F17/00H C01F5/24 L01D257/504 Y02C10/04 Y02C10/06

US: 423/220 423/220P



Family:

Publication number	Publication date	Application number	Application date
US2007217981 AA	20070920	US20070686619	20070315
WO07106883 A2	20070920	WO2007US64054	20070315
WO07106883 A3	20071129	WO2007US64054	20070315

Priority:

US20060782392P 20060315

US20060786937P 20060329

US20070686619 20070315

Probable Assignee: CARBON TRAP TECHNOLOGIES LP

Assignee(s): (std): PENN STATE RES FOUND ; VAN ESSENDELFT DIRK THOMAS ; VAN ESSENDELFT DIRK T

Assignee(s): PENN STATE RESEARCH FOUNDATION ; THE PENN STATE RESEARCH FOUNDATION ; CARBON TRAP TECHNOLOGIES LP

Inventor(s): (std): VAN ESSENDELFT DIRK T ; VAN ESSENDELFT DIRK THOMAS

Inventor(s): VAN ESSENDELFT DIRK

Agent(s): WOODCOCK WASHBURN LLP

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 GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

27) Family number: 52660205 (RU2011118190A)

© PatBase

Title: COMPLEX OF PEASANT FARMS ON AN "?????????????????????????????????????" (Machine translation)

Abstract: Source: RU2011118190A **Machine translation:** 1. Complex farms based on "agrozoobiogeliopnevnotekhnologii" that contains the feed mill plant, repair and servicing shop, farmland, lesoposadku, animals, supplies of forage, a hothouse for growing vegetables, bees, omshanik, two tractors with a set of agricultural machinery, gas station, industrial-commercial cooperative building, bioustanovku, windmill, Stacker, way of germination of grain feed, solar pond basin, drip irrigation device, method for breeding composting worms way stackable frames sheaves on the fields and then moving and stationary thresh grain notable for the fact that, in order to improve the quality and reduce the cost of manufactured products and improve the fertility of arable land contains a reservoir, mini plant for processing and realization of products, repair and servicing shop complex infrastructure agencies, fodder plant, farms on the basis of "agrozoobiogeliopnevnotekhnologii" in milk production-pork farms based on "agrozoobiogeliopnevnotekhnologii" pork-producing milk for attendants complex/x based on "agrozoobiogeliopnevnotekhnologii", all objects linked mezhhozajstvennymi roads processing objects, and are located in the center of the square, where farms! 2. complex of farms based on "agrozoobiogeliopnevnotekhnologii" on p. 1, featuring the fact that farms based on "agrozoobiogeliopnevnotekhnologii" in milk production-pork with

Classifications:

International (IPC 8-9): A01K5/00 (Advanced/Invention)

Family:

Publication number	Publication date	Application number	Application date
RU2011118190 A	20121110	RU20110118190	20110505

Priority:

RU20110118190 20110505

Probable Assignee:

KAMAL RAFIK RAVILEVICH

Assignee(s):

KAMAL RAFIK RAVILEVICH

28) Family number: 4213210 (US4429683A)

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Title: GRADIENT ZONE BOUNDARY CONTROL IN SALT GRADIENT SOLAR PONDS

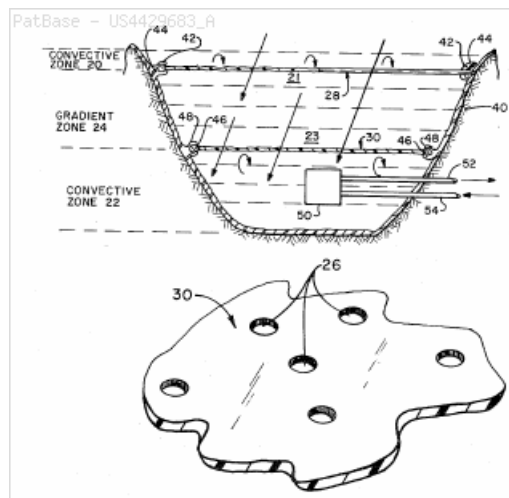
Abstract: A method and apparatus for suppressing zone boundary migration in a salt gradient solar pond includes extending perforated membranes across the pond at the boundaries, between the convective and non-convective zones, the perforations being small enough in size to prevent individual turbulence disturbances from penetrating the hole, but being large enough to allow easy molecular diffusion of salt thereby preventing the formation of convective zones in the gradient layer. The total area of the perforations is a sizable fraction of the membrane area to allow sufficient salt diffusion while preventing turbulent entrainment into the gradient zone.

Classifications:**International (IPC 8-9):** F24J2/04 (Advanced/Invention);

F24J2/04 (Core/Invention)

International (IPC 1-7): F24J3/02**CPC:** F24S10/13 Y02E10/44**European:** F24J2/04C2 Y02E10/44**US:** 126/415 126/430 126/435 126/452 126/561 126/567 126/568

126/643 126/714 4/498

**Family:**

Publication number	Publication date	Application number	Application date
US4429683 A	19840207	US19820426362	19820929

Priority:

US19820426362 19820929

Probable Assignee: US ENERGY**Assignee(s):** (std): US ENERGY

Assignee(s): UNITED STATES OF AMERICA REPRESENTED BY UNITED STATE ; ENERGY US DEPARTMENT OF ; ENERGY US GOV DEPARTMENT OF AS ; THE UNITED STATES OF AMERICA AS REPRESENTED BY THE UNITED STATES DEPARTMENT OF ENERGY ; UNITED STATES DEPARTMENT OF ENERGY AS US GOV ; UNITED STATES OF AMERICA AS REPRESENTED BY UNITED ST

Inventor(s): (std): HULL JOHN R**29) Family number: 3502210 (US4938868A)**

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Title: METHOD OF DISTILLING UNDER PARTIAL VACUUM

Abstract: The vacuum column system distills liquid under partial vacuum conditions. The system rigorously splashes and boils liquid in a boiler chamber so as to form vapor and a rising mist from the splashing liquid. The vapor and mist rise in a circularly converging path through a mist collector. The heavier mist strikes the surfaces of the mist collector and deposits on those surfaces, thereby separating itself from the vapor. The vapor is then drawn to a condensor chamber where droplets of treated liquid are sprayed through it and fall into a shallow pool of treated liquid. The droplets seed condensation of the vapor directly onto the droplets. Also, the droplets assist in encapsulating bubbles of vapor in the pool as the droplets fall into the pool. The bubbles are then entrained with other treated liquid of the pool as the treated liquid is drawn from the pool down an entrainment conduit. A vortex action is created at the mouth or entrance port to the entrainment conduit from the pool, and enhances bubble entrainment. A jet stream of treated liquid into the vortex further enhances bubble entrainment into the entrainment conduit. The vapor of the bubbles condenses or dissolves into treated liquid to form more of it as the liquid travels down the entrainment conduit due to the increasing compression on the bubbles as lower levels are reached in the conduit.

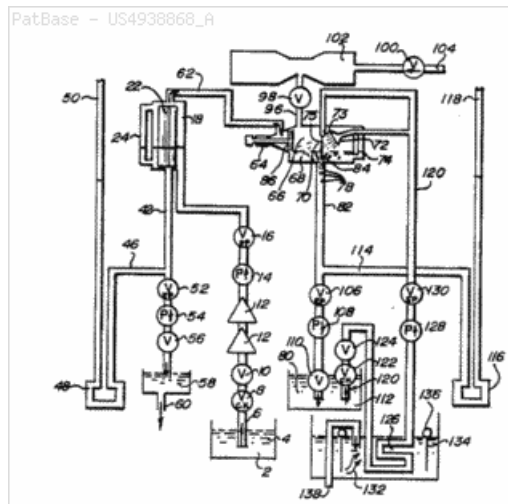
Classifications:**International (IPC 8-9):** B01D1/30 B01D3/10 B01D5/00 C02F1/04

C02F1/16 (Advanced/Invention);

B01D1/00 B01D3/10 B01D5/00 C02F1/04 C02F1/16 (Core/Invention)

International (IPC 1-7): B01D3/10 C02F1/04

CPC: Y10S203/16 Y10S203/21 Y10S203/90 B01D1/305 B01D3/10 B01D5/0027 B01D5/0084 C02F1/04 C02F1/043 C02F1/16
European: B01D1/30B B01D3/10 B01D5/00D B01D5/00K12 C02F1/04 C02F1/04G C02F1/16
US: 202/175 202/176 202/181 202/182 202/185.2 202/197 202/205 203/1 203/11 203/4 203/40 203/91 203/DIG.14 203/DIG.2 203/DIG.20 203/DIG.25



Family:

Publication number	Publication date	Application number	Application date
US4938868 A	19900703	US19880189376	19880502

Priority:

US19880189376 19880502

Probable Assignee: NELSON THOMAS R

Assignee(s): (std): NELSON THOMAS R

Inventor(s): (std): NELSON THOMAS R

30) Family number: 32019215 (US2005133088A)

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Title: SOLAR-POWERED WATER FEATURES WITH SUBMERSIBLE SOLAR CELLS

Abstract: The disclosed technology can be used to implement water movement effects (e.g., water fountains) in a water feature (e.g., bird baths) by, for example, submersing one or more solar cells below a surface of the water in the water feature to convert light energy received thereby into electrical energy sufficient to directly or indirectly drive a pump (which may also, but need not, be submersible below the water surface) that provides a hydraulic pressure/suction that forms a desired water movement effect.

Classifications:

International (IPC 8-9): A01K45/00 B05B17/08 F04B17/03 F04D13/06

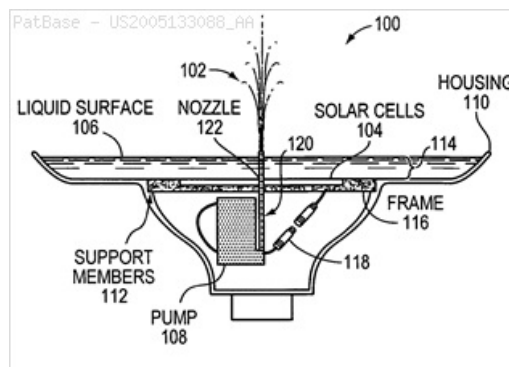
F04D13/08 H01L31/00 H01L31/042 H01L35/08 (Advanced/Invention)

International (IPC 1-7): B05B17/08 F04B17/03 F04D13/06 F04D13/08 H01L31/00

CPC: Y02E10/50 H01L31/042

European: H01L31/042B Y02E10/50

US: 136/244 136/291 136/291S



Family:

Publication number	Publication date	Application number	Application date
AU2004216640 AA	20050707	AU20040216640	20040930
US2005133088 AA	20050623	US20040898606	20040723

Priority:

US20030531411P 20031219 US20040898606 20040723

Probable Assignee: SMART SOLAR LTD

Assignee(s): (std): KELLY CO PTY LTD ; KELLY COMPANY PTY LTD ; ZORBA AGIO AND BOLOGEORGES L P

Assignee(s): ZORBA AGIO AND BOLOGEORGES LP ; SMART SOLAR LTD ; THE KELLY COMPANY PTY LTD

Inventor(s): (std): BOLOGEORGES JAMES P ; JAMES P BOLOGEORGES

Inventor(s): BOLOGEORGES JAMES

Agent(s): FB RICE; FB RICE PTY LTD; JAMES B OLOGEORGES GENERAL PARTNER ZORBA A GIO BOLOGEORGES LP

31) Family number: 6699216 (GB2239489A)

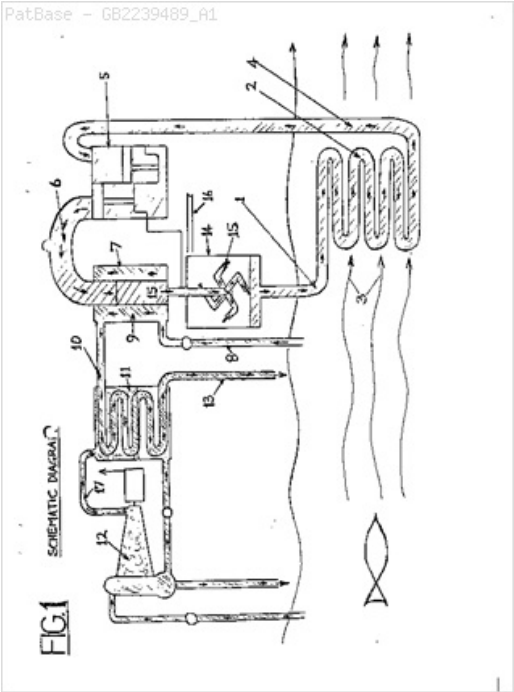
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Title: HARNESSING OF LOW GRADE HEAT ENERGY

Abstract: A vapourising heat exchanger, 2, through which flows a suitable fluid, 1, (such as a refrigerant) for absorbing, via vapourisation, surrounding heat, eg, low grade heat contained in rivers and tidal flows, 3, is followed by a vapour compressor, 5, followed by a further heat exchanger, 7, followed by a turbine, 15. The energy produced by the turbine, 15, may power the compressor, 5. Heat may be transferred via heat exchangers 7, 11 and fluid flow 8 to a further fluid to drive a further turbine 12. Alternative heat exchange circuits are disclosed (Figs. 1A, 1B, 1D) and reference is made to the possible use of a variety of different turbines and a variety of uses of the power generated. Details of the thermodynamic process involved are also discussed.

Classifications:

International (IPC 8-9): F01K17/00 F01K25/08 F03G7/04 F25B11/02 (Advanced/Invention); F01K17/00 F01K25/00 F03G7/00 F25B11/02 (Core/Invention)
International (IPC 1-7): F01K25/00
CPC: F01K17/005 F01K25/08 F03G7/04 F25B11/02
European: F01K17/00B F01K25/08 F03G7/04 F25B11/02 Y02E10/10



Family:

Publication number	Publication date	Application number	Application date
GB2239489 A1	19910703	GB19890028567	19891218
GB8823004 A0	19881109	GB19880023004	19880930
GB8921639 A0	19891108	GB19890021639	19890926
GB8928567 A0	19900221	GB19890028567	19891218

Priority:

GB19880023004 19880930 GB19890021639 19890926 GB19890021639 19890926

Probable Assignee: BRIERLEY R S

Assignee(s): (std): BRIERLEY R S ; BRIERLEY ROGER S ; BRIERLEY ROGER STUART

Assignee(s): ROGER STUART BRIERLEY

Inventor(s): (std): BRIERLEY ROGER STUART

Inventor(s): ROGER STUART BRIERLEY

32) Family number: 7763226 (US4205658A)

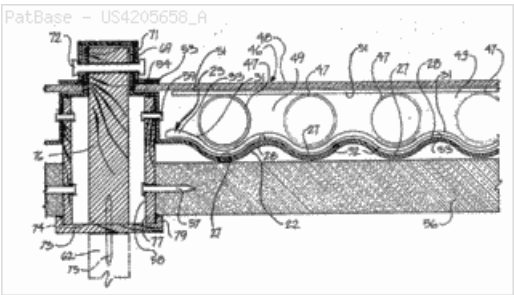
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Title: HEAT TRANSFER PANEL

Abstract: A heat transfer panel is disclosed which can be used as a solar energy collector or as a heat rejecting and absorbing panel. The heat transfer panel employs a thin, flexible membrane mounted to the panel in a distorted condition to define, in part, a plurality of fluid channels. The membrane may take the form of a sealed envelope having inlet and collection means communicating fluid to and from the envelope or may simply be a single membrane. Preferably the membrane is mounted over and distorted against a support surface having side-by-side recesses formed therein. Several apparatus for distorting the membrane against the support surface to form fluid channels are disclosed, as are apparatus for incorporating the panel as an integral building element of a structure. The heat transfer panel is further formed for operation as a contained but low pressure fluid heat transfer system.

Classifications:

International (IPC 8-9): F24J2/14 F24J2/20 F24J2/46 F24J2/50 (Advanced/Invention); F24J2/00 F24J2/04 F24J2/06 (Core/Invention)
International (IPC 1-7): F24J3/02
CPC: Y10S126/906 F24S10/50 F24S23/74 F24S80/30 F24S80/50 Y02B10/20 Y02E10/44 Y02E10/45
European: F24J2/14 F24J2/20 F24J2/20B F24J2/46D F24J2/50 Y02B10/20 Y02E10/44 Y02E10/45
US: 126/444 126/563 126/668 126/674 126/906



Family:

Publication number	Publication date	Application number	Application date
US4205658 A	19800603	US19770839936	19771006

Priority:

US19770839936 19771006

Probable Assignee:

CLARK PETER C

Assignee(s): (std):

CLARK PETER C

Inventor(s): (std):

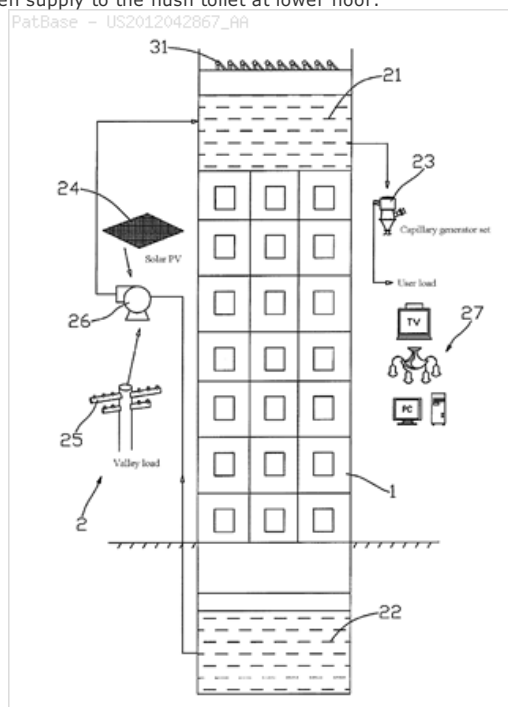
CLARK PETER C

33) Family number: 50661232 (US2012042867A)

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Title: RE-EXCHANGE ENERGY-SAVING BUILDING SYSTEM

Abstract: A re-exchange energy-saving building system in which building power supply system allows to supply water from top floor pond to the capillary generator set; the electric energy generated by capillary generator set is supplied to the user load, and the electric energy generated by solar PV is supplied to the water pump to transfer water from the basement pond to the top floor pond; the valley load in the utility power grid is supplied to the water pump to transfer water from the basement pond to the top floor pond. A parallel connection of solar water heaters, the hot water supply system for the building can provide hot water to the building at any time. The air conditioners for the building enable heating and cooling via GSHP. The water-saving system permits a membrane filter tank to filter the bath water and domestic water and then supply to the flush toilet at lower floor.

Classifications:**International (IPC 8-9):** F24J2/42 F24S90/00 (Advanced/Invention)**CPC:** Y02B10/20 F24D17/0021 F24D2200/14 F24D2220/08 F24D5/12 F24D2200/11 F24D2200/12 F03B13/06 Y02B10/40 Y02B10/50 Y02B10/70 Y02E10/22 Y02E60/17 F24D5/005 F24S2020/17 Y02B30/13**European:** Y02B10/20**US:** 126/567**Family:**

Publication number	Publication date	Application number	Application date
US2012042867 AA	20120223	US20100858722	20100818

Priority:

US20100858722 20100818

Probable Assignee:

FAN PINLIAN

Assignee(s): (std):

FAN PINLIAN

Inventor(s): (std):

FAN PINLIAN

34) Family number: 49950241 (CA2703276A)

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Title: METHOD FOR IMPROVING ORE EXTRACTION

Abstract: There is disclosed a method of augmenting ore extraction from a solution mine having caverns comprising: providing at least a pair of opposed caverns containing ore to be extracted; extracting ore from one cavern of the caverns; recovering ore to exhaust the one cavern; depositing tailings from an ore exhausted cavern into the ore exhausted cavern and extracting ore from other said cavern of said caverns.

Classifications:**International (IPC 8-9):** C22B3/00 E21B43/30

E21C41/22 (Advanced/Invention)

CPC: E21B43/28 E21C45/00**European:** E21B43/28 E21C45/00

Application number / numéro de demande: 2703276Figure: 1 (page 1)

Page: _____

Unavailable items
received with this application
(Requiert original documents in File Prep. Section on the 10th floor)

Documents reçu avec cette demande ne peuvent être balayés
(Commander les documents originaux dans la section de préparation des dossiers au 10^{ème} étage)

Family:

Publication number	Publication date	Application number	Application date
CA2703276 AA	20111105	CA20102703276	20100505
CA2703276 C	20151117	CA20102703276	20100505

Priority:

CA20102703276 20100505

Probable Assignee: KARNALYTE RESOURCES INC**Assignee(s):** (std): KARNALYTE RESOURCES INC**Assignee(s):** MA SIU ; PHINNEY ROBIN ; ROBINSON MICHAEL**Inventor(s):** (std): MA SIU ; PHINNEY ROBIN ; ROBINSON MICHAEL**Agent(s):** PERLEY ROBERTSON HILL AND MCDUGALL LLP; MBM INTELLECTUAL PROPERTY LAW LLP; MACPHERSON LESLIE AND TYERMAN LLP**35) Family number: 8395248 (JP61038355A)**

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Title: METHOD AND DEVICE FOR FORMING AND MAINTAINING CONCENTRATION GRADIENT OF SOLAR POND

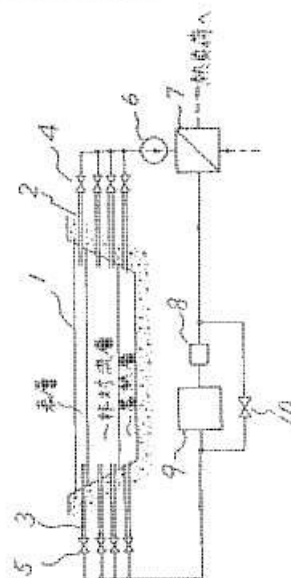
Abstract: PURPOSE: To permit to form, maintain and repair the concentration gradient of salt content continuously and easily by a simple device by a method wherein the solar pond is divided into a plurality of layers in the depthwise direction of flow fluid horizontally substantially and to control the concentration of the salt content of the fluid flowed through said plurality of layer.

CONSTITUTION: The solar pond 1 is filled with fresh water or salt water of some concentration at first in a degree that the water intake pipe 2 and the return pipe 3 of the lowest stage are submerged perfectly or more to a depth corresponding to the thickness of a heat accumulating layer. A water intake valve 4 and a return valve 5 are opened and a pump 6 is operated to circulate the fresh water or the salt water in the solar battery 1. Salt is thrown into a concentration gradient maintaining device 9 to increase the concentration of the salt gradually under mixing it. The concentration of salt is measured in the solar pond 1 and when it has become a specified concentration finally, the water intake valve 4 and the return valve 5 at the position of heat accumulating layer are closed, the same valves at the position of a non-convection layer immediately above the heat accumulating layer are opened and above-mentioned operations are repeated to control the concentration of salt so that the upper the layer the lower the concentration of the salt in the solar pond 1.

Classifications:

International (IPC 8-9): F24J2/00 F24J2/04 (Advanced/Invention);
F24J2/00 F24J2/04 (Core/Invention)

International (IPC 1-7): F24J2/00**CPC:** F24S10/13 Y02E10/44**European:** F24J2/04C2 Y02E10/44

**Family:**

Publication number	Publication date	Application number	Application date
JP61038355 A2	19860224	JP19840158604	19840731

Priority:

JP19840158604 19840731

Probable Assignee:

TOSHIBA CORP

Assignee(s): (std):

TOSHIBA CORP

Inventor(s): (std):

NAKAMOTO YASUHATSU

36) Family number: 4903251 (US4553529A)

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Title: METHOD OF AN APPARATUS FOR DYNAMICALLY STABILIZING THE WIND-MIXED LAYER OF A SALT-WATER SOLAR POND

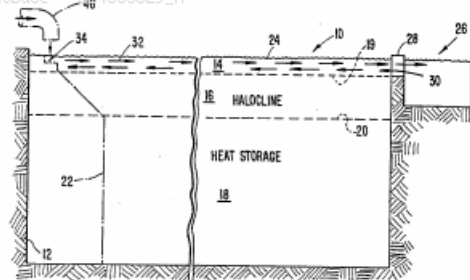
Abstract: The wind-mixed layer of a salt-water solar pond is dynamically stabilized against wind by creating a two-layer flow regime in the wind-mixed layer. Lighter less dense water flows in one direction adjacent the surface of the pond and heavier, more dense water flows in the opposite direction beneath the lighter water. The two-layer flow regime can be created by selectively connecting the wind-mixed layer to a source of brine whose density exceeds the average density of water in the wind-mixed layer. Alternatively, the two-layer flow regime is created by selectively adding fresher water to the surface of the solar pond at the surface thereof to replace evaporation losses.

Classifications:**International (IPC 8-9):** F24J2/04 (Advanced/Invention);

F24J2/04 (Core/Invention)

CPC: F24S10/13 Y02E10/44**European:** F24J2/04C2 Y02E10/44**US:** 126/415 126/561 60/641.8

PatBase - US4553529_A

**Family:**

Publication number	Publication date	Application number	Application date
US4553529 A	19851119	US19820396759	19820709
US4577618 A	19860325	US19840637699	19840806

Priority:

US19820396759 19820709

US19840637699 19840806

Probable Assignee: SOLMAT SYST**Assignee(s):** (std): SOLMAT SYST**Assignee(s):** SOLMAT SYSTEMS LTD ; SOLMAT SYSTEMS LTD A CORP OF ISRAEL**Inventor(s):** (std): ASSAF GAD

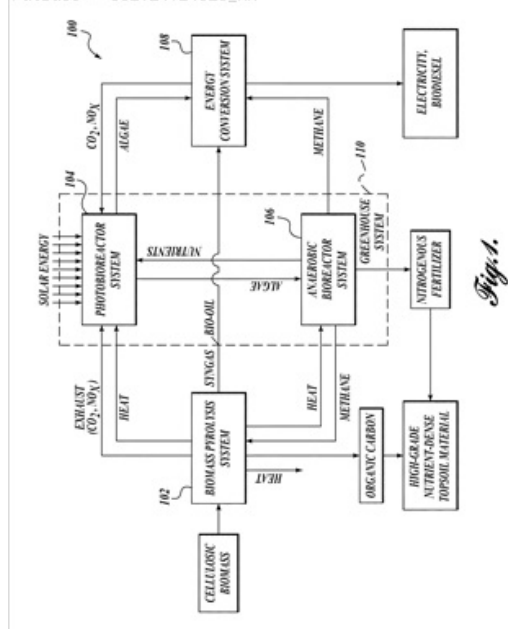


Fig. 1

Family:

Publication number	Publication date	Application number	Application date
US2014024528 AA	20140123	US20130945814	20130718
US2014024529 AA	20140123	US20130945835	20130718
WO14015184 A1	20140123	WO2013US51154	20130718

Priority:

US20120673170P 20120718 US20130775538P 20130309 US20130945814 20130718
 US20130945835 20130718

Probable Assignee: ALGAE AQUA CULTURE TECHNOLOGY INC

Assignee(s): (std): ALGAE AQUA CULTURE TECHNOLOGY INC

Inventor(s): (std): KELSON ROBIN DORIA ; SMITH MICHAEL FRANCIS ; HOLECEK ROBERT MICHAEL

Agent(s): PEYSER EMILY C

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

39) Family number: 55708278 (US2014030695A)

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Title: BIOREFINERY CONTROL SYSTEM, COMPONENTS THEREFOR, AND METHODS OF USE

Abstract: An autonomous control system can be used with one or more systems or components to improve the operation of the systems or components. For example, an autonomous control system can be used in combination with a biorefinery system to improve the operation of the biorefinery system.

Classifications:

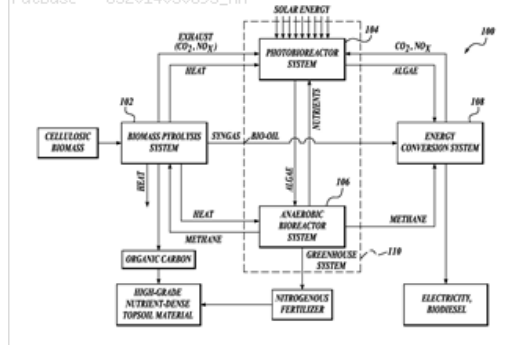
International (IPC 8-9): C12M1/00 C12M1/08 C12M1/107 C12M1/36 C12M3/00 C12Q3/00 (Advanced/Invention)

CPC: C12M41/48 C12Q3/00 C12M21/02 C12M21/04 C12M23/18

C12M23/58 C12M27/24 C12M43/02 C12M43/04 C12M43/08

US: 435/286.1 435/3

PatBase - US2014030695_AA

**Family:**

Publication number	Publication date	Application number	Application date
US2014030695 AA	20140130	US20130951296	20130725
US2019078049 AA	20190314	US20180944329	20180403
WO14018785 A2	20140130	WO2013US52114	20130725
WO14018785 A3	20140320	WO2013US52114	20130725

Priority:

US20120675766P 20120725 US20130780842P 20130313 US20130951296 20130725
 US20180944329 20180403

Probable Assignee: ALGAE AQUA CULTURE TECHNOLOGY INC**Assignee(s):** (std): ALGAE AQUA CULTURE TECH INC ; ALGAE AQUA CULTURE TECHNOLOGY INC**Inventor(s):** (std): SMITH MICHAEL FRANCIS**Agent(s):** FITZPATRICK BRIAN CASEY

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

40) Family number: 42140292 (US2008210220A)

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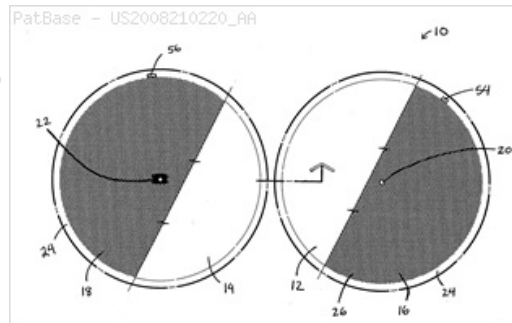
Title: SOLAR ENERGY GENERATION AND STORAGE SYSTEM

Abstract: A solar energy system including a plurality of solar panels mounted at an angle on a flotation device floating on a body of water is provided. A mechanism rotates the flotation device to substantially track the sun as it traverses the sky. The rotation of the flotation device and angled solar panels increases the proportion of incident sunlight that impacts the panels in an approximately perpendicular direction, allowing the sunlight to be absorbed by the panels and converted to electrical energy. The system also stores the energy collected during the day for later use.

Classifications:

International (IPC 8-9): F24J2/38 F24S50/20 (Advanced/Invention);
 F24J2/38 (Core/Invention)

CPC: Y02E10/47 Y02E10/50 H02S20/32 H02S20/00 F24S20/70 F24S25/10
 F24S30/422 F24S40/00 F24S2020/16

European: R24J2/00P20 Y02E10/47 Y02E10/50**US:** 126/573**Family:**

Publication number	Publication date	Application number	Application date
US2008210220 AA	20080904	US20070967650	20071231

Priority:

US20060882909P 20061230 US20070967650 20071231

Probable Assignee: JOHAN PERSLOW INC**Assignee(s):** (std): PERSLOW JOHAN A**Assignee(s):** JOHAN PERSLOW INC**Inventor(s):** (std): PERSLOW JOHAN A**Agent(s):** CHRISTIE PARKER AND HALE LLP**41) Family number: 8022294 (JP60169052A)**

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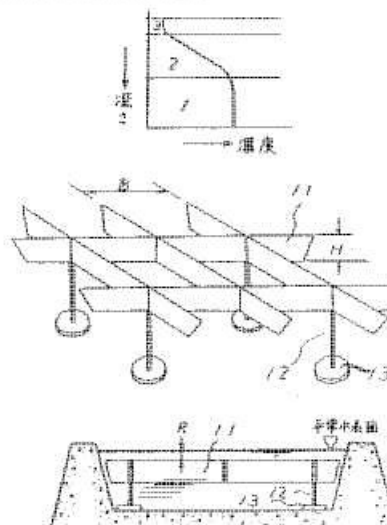
Title: SOLAR POND

Abstract: PURPOSE: To eliminate the attenuation of the sunlight due to stains and enable to improve the easiness and economical efficiency of maintenance and repair by a structure wherein a wave attenuating device consisting in arranging vertical transparent wave attenuating plates at proper intervals is submerged so as to lie in the water at the predetermined depth under the water surface. CONSTITUTION: A wave attenuating device consists in arranging vertical flat transparent wave attenuating plates such as plastic glass or the like in parallel crosses and providing support posts 12 at proper intervals and is sunk under the water surface at the depth of about 15-30cm and 50cm at the deepest. A massive leg plate 13 is attached to each support post 12 so as to produce no nick in a waterstop sheet when the plate 13 is placed on the sheet lain onto the bottom of a solar pond and, in addition, to facilitate to take the whole wave attenuating device out of the solar pond for cleaning and repair. When wind blows against the above-mentioned solar pond, waves are produced in a surface layer 3. However the waves do not grow to billows, because the waves, which are fundamentally circular movements of water particles, are impeded by the wave attenuating plates 11. No destruction of concentration gradient due to the disturbance of a heat insulating layer 2 is resulted. The wave attenuating plate has a self-regulating action to encourage the wave attenuating effect by exposing its upper part partially in the air, when the waves turn to billows.

Classifications:

International (IPC 8-9): F24J2/00 F24J2/04 (Advanced/Invention);
 F24J2/00 F24J2/04 (Core/Invention)

International (IPC 1-7): F24J2/00**CPC:** F24S10/10 Y02E10/44**European:** F24J2/04C Y02E10/44

**Family:**

Publication number	Publication date	Application number	Application date
JP1763891 C3	19930528	JP19840021543	19840210
JP4057942 B4	19920916	JP19840021543	19840210
JP60169052 A2	19850902	JP19840021543	19840210

Priority:

JP19840021543 19840210

Probable Assignee:

TOSHIBA KK

Assignee(s): (std):

TOSHIBA KK

Assignee(s):

TOKYO SHIBAURA ELECTRIC CO

Inventor(s): (std):

NAKAMOTO YASUOKI

Inventor(s):

NAKAMOTO HATAOKI

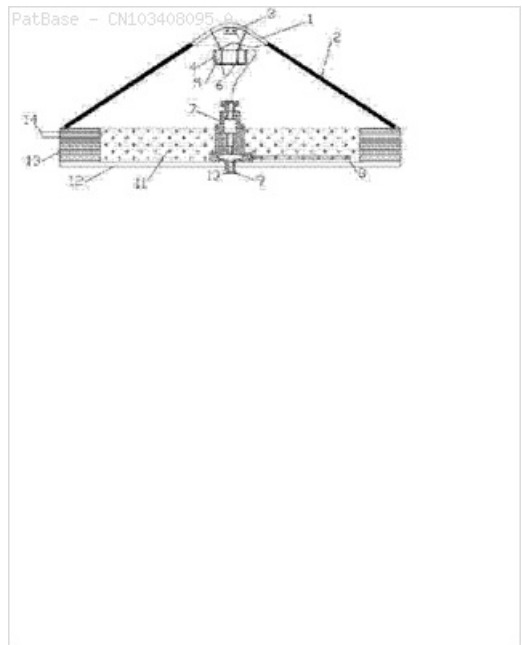
42) Family number: 55264301 (CN103408095A)

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Title: FLOATING SELF-PROPELLED SOLAR ENERGY WATER BODY PURIFIER

Abstract: The invention discloses a floating self-propelled solar energy water body purifier which can be applied to the treatment of polluted water bodies such as rivers, lakes and ponds. The floating self-propelled solar energy water body purifier comprises an umbrella-shaped casing, solar panels, a remote control device, clamping grooves, a storage battery, supports, a water pump, a water pump water outlet pipe, a water pump water suction port, an antifouling net, a water purifying system, a circular baseplate, annular buoys, water drainage pipes and control valves. According to the invention, the solar energy is taken as an energy source, and the counter-acting force generated by the drainage of the floating self-propelled solar energy water body purifier is taken as power, so that the self-sufficient, cheap, clean and convenient energy source of the overall device can be realized; through the adoption of the floating type design, the appearance is attractive, and the water body can be subjected to in-situ repairing; through the adoption of the efficient purifying system, pollutants such as nitrogen and phosphorus substances in water bodies can be removed efficiently; besides, the floating self-propelled solar energy water body purifier, provided by the invention, has the advantages of high purifying efficiency, simple structure, convenience for mounting and use, no energy consumption and the like.

Classifications:**International (IPC 8-9):** C02F1/28 (Advanced/Invention)**CPC:** Y02W10/37



Family:

Publication number	Publication date	Application number	Application date
CN103408095 A	20131127	CN201310332229	20130802
CN103408095 B	20150204	CN201310332229	20130802

Priority:

CN201310332229 20130802

Probable Assignee: UNIV JIANGSU

Assignee(s): (std): JIANGSU UNIV ; UNIV JIANGSU

Inventor(s): (std): JIANG ZHIHUI ; HUANG XIAOLONG ; XIE QINGJIE ; WU CHUNDU

43) Family number: 2002303 (US4406748A)

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Title: LIQUID PURIFICATION SYSTEM

Abstract: A liquid purification system, method and apparatus includes a plurality of operationally interconnected chambers. A supply or inlet chamber is held at about atmospheric temperature while other chambers of the system are held at a partial vacuum. The liquid to be purified is metered through a pressure differential between the supply or first chamber and a second chamber to induce spontaneous vaporization of the liquid. The temperatures of the chambers are reduced sufficiently so that, in the case of water, temperature-pressure conditions in the second chamber are below the triple point so as to condense ice and precipitate impurities into another chamber from the spontaneous vaporization. Condensation of the vapor in still another chamber recovers pure liquid. A temperature differential mechanism operatively connected to the chambers insures that condensation of the vapor will occur.

Classifications:

International (IPC 8-9): B01D3/02 B01D9/02 B01D9/04 C02F1/04 C02F1/22 G02B1/12 (Advanced/Invention);

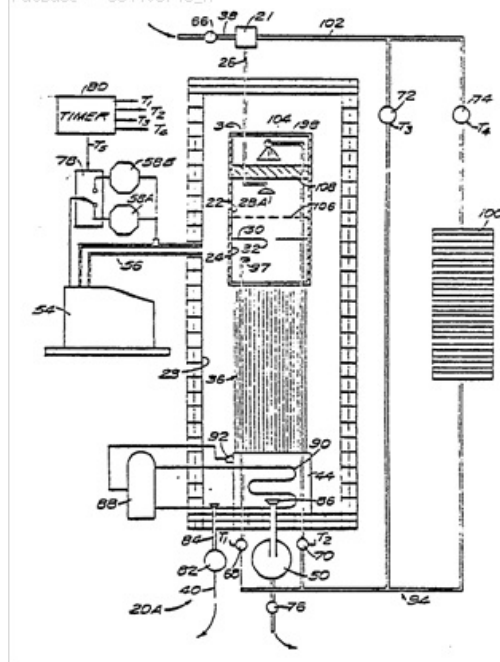
B01D9/00 C02F1/04 C02F1/22 G02B1/10 (Core/Invention)

International (IPC 1-7): B01D3/02 B01D5/00 B01D9/04 C02F1/04 G02B1/12

CPC: Y10S203/18 C02F1/04 B01D9/04 C02F1/22 C02F2103/08 Y02W10/37 Y02A20/128 Y02A20/132

European: B01D9/04 C02F1/04 C02F1/22 M02F103/08

US: 202/233 203/10 203/21 203/DIG.17 62/124

**Family:**

Publication number	Publication date	Application number	Application date
AU198289943 A1	19830408	AU19820089943	19820917
CA1183487 A1	19850305	CA19820412063	19820923
DE3279363 D1	19890223	DE19823279363	19820917
EP0090004 A1	19831005	EP19820903023	19820917
EP0090004 A4	19840209	EP19820903023	19820917
EP0090004 B1	19890118	EP19820903023	19820917
IL66785 A0	19821231	IL19820066785	19820913
IL66785 A1	19860831	IL19820066785	19820913
IT1152634 A	19870107	IT19820023428	19820924
IT8223428 A0	19820924	IT19820023428	19820924
JP58501577 T2	19830922	JP19820503024T	19820917
US4406748 A	19830927	US19810305892	19810925
WO8301011 A1	19830331	WO1982US01279	19820917

Priority:

US19810305892 19810925 WO1982US01279 19820917 CA19820412063 19820923

Probable Assignee: HOFFMAN FRANK W

Assignee(s): (std): HOFFMAN FRANK W

Assignee(s): HOFFMAN FW ; IMR FINANCIAL SERVICES CO ; LUDLOW SAVINGS BANK ; CALFRAN INT ; CALFRAN INT INC A DE CORP ; FRANK W HOFFMAN

Inventor(s): (std): HOFFMAN F W ; HOFFMAN FRANK W

Inventor(s): HOFFMAN FW ; FRANK W HOFFMAN

Agent(s): BERESKIN AND PARR; REINHOLD COHN AND PARTNERS

Designated states: AT AU BE BR CH DE DK FR GB JP LU NL NO SE SU

44) Family number: 3381312 (US4910912A)

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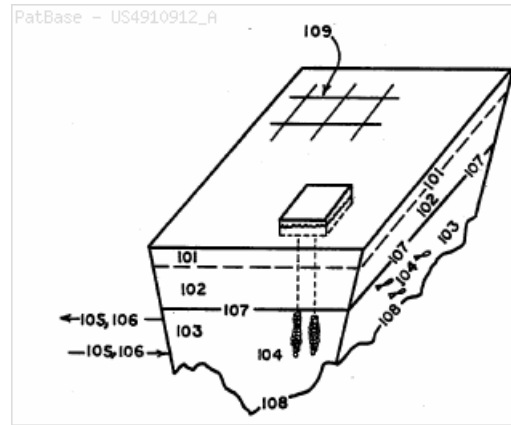
Title: AQUACULTURE IN NONCONVECTIVE SOLAR PONDS

Abstract: Apparatus is presented for cultivating aquaculture and mariculture crops predominantly in the warm storage zone (SZ) of a durable, salt gradient, solar pond. This SZ would be maintained near the optimum salinity and temperature for the particular crop and especially guarded against overheating. The nonconvective zone (NCZ) of this pond would insulate the SZ and buffer diurnal temperature oscillations in this SZ. Variations of the basic invention include using a partition to separate the SZ and NCZ, not using a pond liner, and adding heat from an external source to the SZ, such as geothermal or power plant waste heat. Because temperature elevations will usually be only 10 DEG to 25 DEG C., it will commonly be possible to insure stable stratification with modest salinity changes and to supply sufficient heat from directly absorbed solar energy alone. These solar ponds could economically provide optimum growing conditions fall through spring in temperate latitudes. Three variations are worth particularly noting. In solar ponds in dry climates the SZ could have a salinity near 12 percent while the UCZ was near 2 percent. High salinity crops would be cultivated in the SZ such as Artemia, the brine shrimp, or Dunaliella, an algae. An attractive variation for locations near the shore would use a fresh water UCZ, and cultivate marine crops in a seawater SZ. Fresh water crops could be cultivated in a fresh water SZ separated by a partition form a stable, saline NCZ. All of these ponds could be very inexpensive, located outdoors at a wide variety of sites, many of which are now not useful, and provide optimum growing conditions and high productivity yearround. Moreover cultivating crops in a solar pond will require less sophisticated engineering and management of the pond than extracting energy from it.

Classifications:

International (IPC 8-9): A01G31/00 (Advanced/Invention);

A01G31/00 (Core/Invention)
International (IPC 1-7): A01G31/00 A01K61/00
CPC: A01G31/00 Y02P60/642
European: A01G31/00
US: 119/2 119/200 119/204 119/3 119/4 47/1.4 47/59 47/59R 47/62 47/62R



Family:

Publication number	Publication date	Application number	Application date
US4910912 A	19900327	US19850812980	19851224

Priority:

US19850812980 19851224

Probable Assignee: LOWREY III O PRESTON

Assignee(s): (std): LOWREY III O PRESTON

Inventor(s): (std): LOWREY III O PRESTON

45) Family number: 30493321 (US4707995A)

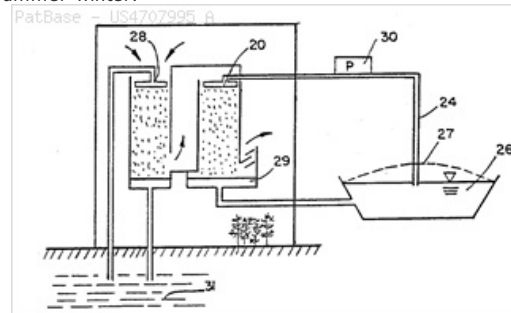
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Title: APPARATUS AND METHOD FOR CONTROLLING TEMPERATURE AND HUMIDITY WITHIN AN ENCLOSURE

Abstract: Apparatus for humidity and temperature control of the air in an enclosure comprising brine-vapor-air direct heat exchanger apparatus disposed in communication with an enclosure and a brine reservoir arranged to store brine and to be exposed to naturally occurring temperature gradients for desired conditioning of the brine. The temperature gradients may be relatively short term, such as day-night or may be longer term, such as summer-winter.

Classifications:

International (IPC 8-9): A01G9/24 A01K1/00 B01D53/26 F24F12/00 F24F3/14 F24F5/00 F25B17/00 F28C3/06 (Advanced/Invention); A01G9/24 A01K1/00 B01D53/26 F24F3/12 F24F5/00 F28C3/00 (Core/Invention)
International (IPC 1-7): A01G9/24 A01K1/00 B01D53/26 F24F11/00 F24F12/00 F24F3/00 F24F3/14 F24F5/00 F24F6/00 F24J2/02 F25B17/00 F25D17/06 F25D23/00 F28C3/10
CPC: Y02A40/268 F24F5/0014 A01G9/246 F24F3/1417 F24F5/00 F24F2003/144 F28C3/06 F24F3/1411
European: A01G9/24E F24F3/14 F24F3/14C F24F3/14C1 F24F5/00 F24F5/00C3 F28C3/06 R24F3/14E
US: 237/1R 237/81 62/271 62/309 62/311 62/92 62/94



Family:

Publication number	Publication date	Application number	Application date
AU198818676 A1	19890105	AU19880018676	19880701
AU608863 B2	19910418	AU19880018676	19880701
CA1279539 A1	19910129	CA19840450355	19840323
CA1305857 A1	19920804	CA19860518827	19860923
DE0123447 T1	19860430	DE19840302023T	19840326
DE3484571 D1	19910620	DE19843484571	19840326
DE3486328 D1	19940901	DE19843486328	19840326
DK363388 A	19890103	DK19880003633	19880630
DK363388 A0	19880630	DK19880003633	19880630
EP0123447 A1	19841031	EP19840302023	19840326
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EP0217656 A2	19870408	EP19860307429	19860926
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EP0361534 A2	19900404	EP19890119906	19840326
EP0361534 A3	19900509	EP19890119906	19840326
EP0361534 B1	19940727	EP19890119906	19840326
ES2003106 AF	19881016	ES19860002145	19860925
ES530941 A0	19850201	ES19840530941	19840323
ES530941 A2	19850301	ES19840530941	19840323
ES8502838 A1	19850201	ES19840530941	19840323
IL63115 A0	19810913	IL19810063115	19810618
IL63115 A1	19890910	IL19810063115	19810618
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IL86860 A0	19881130	IL19880086860	19880624
JP1098845 A2	19890417	JP19880164786	19880630
JP1693117 C3	19920917	JP19840057178	19840324
JP3056375 B4	19910828	JP19840057178	19840324
JP59210235 A2	19841128	JP19840057178	19840324
JP62074221 A2	19870406	JP19860229488	19860926
NL8801679 A	19890201	NL19880001679	19880701
NL8801679 A1	19890201	NL19880001679	19880701
NO882924 A	19890103	NO19880002924	19880630
NO882924 A0	19880630	NO19880002924	19880630
NO882924 L	19890103	NO19880002924	19880630
SE8802419 A	19890103	SE19880002419	19880628
SE8802419 A0	19880628	SE19880002419	19880628
SE8802419 L	19890103	SE19880002419	19880628
US4707995 A	19871124	US19850738544	19850528
US4819447 A	19890411	US19830479009	19830325
US4841740 A	19890627	US19870069091	19870702
US4869070 A	19890926	US19850780285	19850926
US4995242 A	19910226	US19890294114	19890106
US5020333 A	19910604	US19890316915	19890228
US5228303 A	19930720	US19910811928	19911223
US5249430 A	19931005	US19920993443	19921216

Priority:

IL19810063115	19810618	US19820377368	19820512	US19820377368	19820730
US19830479009	19830325	CA19840450355	19840323	EP19840302023	19840326
EP19840302023P	19840326	US19850738544	19850528	US19850780285	19850926
CA19860518827	19860923	US19870069091	19870702	US19890294114	19890106
US19890316915	19890228	US19900575631	19900831	US19910692173	19910426
US19910811928	19911223	US19920993443	19921216		

Probable Assignee: GEOPHYSICAL ENGINEERING CO

Assignee(s): (std): ASSAF GAD ; GEOPHYSICAL ENG CO ; GEOPHYSICAL ENGINEERING CO TE SEATTLE WASHING ; JIOFUIIKARU ENG CO ; ORMAT TURBINES

Assignee(s): ORMAT TURBINES LTD ; GEOPHYSICAL ENGINEERING CO A DELAWARE CORPOR ; GEOPHYSICAL ENGINEERING CO SEATTLE WASH US ; GEOPHYSICAL ENGINEERING CO WILMINGTON DEL US ; GEOPHYSICAL ENGINEERING CO TE SEATTLE WASHINGTON VER ST V AM ; GEOPHYSICAL ENGINEERING CO A DELAWARE CORPORATION ; GEOPHYSICAL ENGINEERING CO ; GEOPHYSICAL ENGINEERING CO A CORP OF DE ; GEOPHYSICAL ENGINEERING CO A DELAWARE CORP ; ASSAF GAD REHOVOT IL ; GAD ASSAF ; GATSUDO ATSUSAFU

Inventor(s): (std): SINNES S A ; GADO ATSUSAFU ; ASSAF GAD ; S A SINNES ; GADO ASAFU ; GAD ASSAF ; FISHER URIYEL ; ASSAF REHOVOT IL G

Inventor(s): G ASSAF REHOVOT IL ; ASSAF GAD REHOVOT IL ; NAME NOT GIVEN ; GATSUDO ATSUSAFU

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; SWABEY OGILVY RENAULT; PASCAL AND ASSOCIATES; SANFORD TCOLB AND CO; WOLFF BREGMAN AND GOLLER

Designated states: BE DE FR GB IT NL

46) Family number: 8047324 (US4244351A)

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Title: SOLAR COLLECTION SYSTEM

Abstract: The concentration of the solute in solution in a saturated non-convecting solar pond is greatest at a lower hotter level decreases continuously toward a higher cooler level and is saturated at all levels, thus preventing solute diffusion. In the customary operation of such saturated non-convecting solar ponds, the heat generated by incident radiation is absorbed in a bottom or lower layer. Because of the continuously decreasing density of solute which is near saturation from the lower to the upper layers, there is little salt convection and the pool tends to be further stabilized. Further, by heating due to absorption of the radiation largely at the lower level, a temperature gradient is maintained in which the upper layers remain cool, evaporation and consequent loss of heat is inhibited and the efficiency of the solar pond is improved. It has been discovered that a brine consisting essentially of an appropriate mixture of sodium carbonate (Na₂CO₃) and sodium bicarbonate (NaHCO₃) as a solute in water is an especially desirable solution for use in a saturated non-convecting solar pond. A cover material may be used as a barrier material over the solution to impede carbon dioxide transfer across the solution surface.

Classifications:

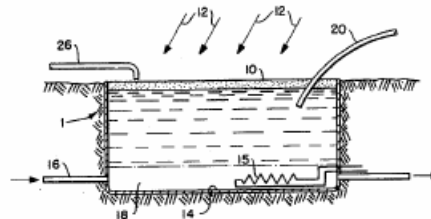
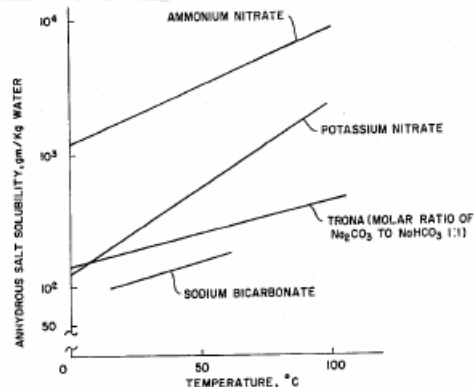
International (IPC 8-9): F24J2/04 (Advanced/Invention); F24J2/04 (Core/Invention)

International (IPC 1-7): C22B26/10 F24J3/02

CPC: F24S10/10 Y02E10/44

European: F24J2/04C Y02E10/44

US: 126/400 126/415 126/567 126/568 126/619 126/679 252/73 423/206.2

**Family:**

Publication number	Publication date	Application number	Application date
US4244351 A	19810113	US19780958037	19781106

Priority:

US19780958037 19781106

Probable Assignee: INTERTECHNOLOGY SOLAR CORP**Assignee(s):** (std): INTERTECHNOLOGY SOLAR CORP**Inventor(s):** (std): LOEB SIDNEY ; MEHTA GURMUKH D**47) Family number: 4486346** (US4470403A)

© PatBase

Title: SALTLESS SOLAR POND

Abstract: A solar pond (16) adapted for efficiently trapping and storing radiant solar energy without the use of a salt concentration gradient in the pond is disclosed. A body of water (20) which may be fresh, saline, relatively clear or turbid, is substantially covered by a plurality of floating honeycomb panels (18). The honeycomb panels (18) are made of a material such as glass which is pervious to short wave solar radiation but impervious to infrared radiation. Each honeycomb panel (18) includes a multitude of honeycomb cells (42) having a height-to-width aspect ratio of at least approximately 14 to 1. The honeycomb panels (18) are divided into the elongated honeycomb cells (42) by a multitude of intermediate plates (44) disposed between a bottom plate (34) and top plate (36) of the panel (18). The solar pond (16) of the invention is well suited for providing hot water of approximately 85 DEG -90 DEG C. temperature for direct heating applications, and for electrical power generation.

Classifications:

International (IPC 8-9): F24J2/04 (Advanced/Invention);
F24J2/04 (Core/Invention)

International (IPC 1-7): F24J3/02

CPC: F24S10/10 Y02E10/44

European: F24J2/04C Y02E10/44

US: 126/415 126/567 126/568 4/498

**Family:**

Publication number	Publication date	Application number	Application date
US4470403 A	19840911	US19820383068	19820528

Priority:

US19820383068 19820528

Probable Assignee: NASA**Assignee(s):** (std): NASA

Assignee(s): THE UNITED STATES OF AMERICA AS REPRESENTED BY THE ADMINISTRATOR OF THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ; ADMINISTRATOR NATIONAL AERONAUTICS AND SPACE ADMINI ; ADMINISTRATOR NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AS US GOV ; ADMINISTRATOR OF NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AS US GOV

Inventor(s): (std): LIN EDWARD I H

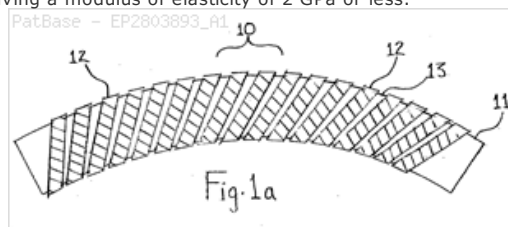
Title: FLEXIBLE FLUID CONDUIT FOR HEAT TRANSFER CONDUIT DE FLUIDE FLEXIBLE POUR LE TRANSFERT DE CHALE

Abstract: A flexible conduit used in heat transfer applications comprising a flexible tube (11) arranged to conduct a heat transfer fluid, fixed to the outer surface of said tube and contiguous with said surface a sheath (12) of material with thermal conductivity greater than 15 W/m degrees centigrade, said sheath having means of flexing such that said sheath is at least as flexible as said tube, said means of flexing being spacing between adjacent segments of said sheath said tube and said sheath together having a minimum bend radius of 10 or less. said tube and said sheath together having a modulus of elasticity of 2 GPa or less.

Classifications:

International (IPC 8-9): F16L11/00 F16L11/10 F16L11/115 F16L11/12 F16L3/04 F16L3/13 F24D19/00 F24D3/14 F24J2/24 F24J2/46 F24J3/08 F24S10/70 F24S40/00 F24T10/00 F28F1/08 F28F1/12 F28F1/36 F28F21/06 F28F21/08 (Advanced/Invention)

CPC: F24D3/146 F28F1/12 F28F21/088 F16L3/04 F16L3/13 F16L11/10 F16L11/115 F24D3/142 F24D3/144 F24D19/0021 F28F1/36 F28F21/063 F28F2255/02 F28F21/089 F28F21/061 F28F21/084 F16L11/00 F28F2275/025 Y02E10/12 Y02E10/44 F28F1/08 F24D3/148 F16L11/12 F24S10/73 F24S80/10 F24T10/10 F24T10/00 Y02B30/24

**Family:**

Publication number	Publication date	Application number	Application date
DE602013023272 D1	20170831	DE201360023272T	20131118
EP2803893 A1	20141119	EP20130005416	20131118
EP2803893 B1	20170712	EP20130005416	20131118
GB201220800 A0	20130102	GB20120020800	20121119
GB2508018 A1	20140521	GB20120020800	20121119

Priority:

GB20120020800 20121119 EP20130005416 20131118

Probable Assignee: GREGORY BRUCE

Assignee(s): (std): GREGORY BRUCE

Assignee(s): BRUCE GREGORY

Inventor(s): (std): GREGORY BRUCE

Inventor(s): BRUCE GREGORY

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

Title: FEED DISTRIBUTION METHOD FOR VERTICAL TUBE EVAPORATION

Abstract: An improved upflow vertical tube evaporator is characterized by providing a distributor plate located within a certain critical distance or gap of the tube inlets in order to dampen cross flow between the tubes. The critical gap for providing stable operation is disclosed as lying between 0.01 and 0.2 of the average tube diameter. In the preferred embodiment, the distributor plate is capable of being translated relative to tube inlets so that the gap may be widened beyond the critical dimension during periods of stable flow in order to decrease the tube-side pressure drop and increase the heat transfer.

Classifications:

International (IPC 8-9): B01D1/00 B01D1/06 B01D1/10 F22B1/16 (Advanced/Invention);

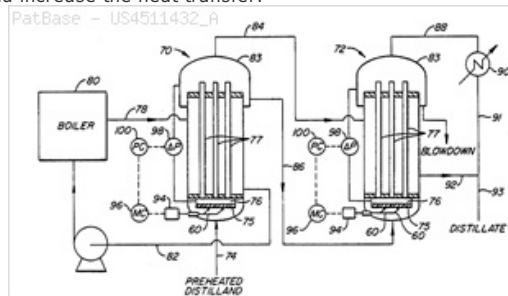
B01D1/00 F22B1/00 (Core/Invention)

International (IPC 1-7): B01D1/06 B01D1/08 B01D1/10 B01D1/22 B01D1/26 B01D1/30 B01D3/04 B01D3/34 B01D3/42 F22B1/16 F28F27/02

CPC: F28D7/16 F28F9/0278 F28F27/02 Y10S159/04 Y10S159/02 Y10S159/08 Y10S159/13 Y10S159/16 Y10S159/38 Y10S159/901 Y10S203/08 Y10S203/18 B01D1/10 B01D1/0082 Y02A20/128

European: B01D1/00D B01D1/10

US: 159/27.4 159/274 159/47.1 159/471 159/901 159/DIG.13 159/DIG.16 159/DIG.2 159/DIG.38 159/DIG.4 159/DIG.8 202/174 202/237 202/264 203/1 203/11 203/22 203/24 203/25 203/40 203/7 203/92 203/95 203/DIG.17 203/DIG.8

**Family:**

Publication number	Publication date	Application number	Application date
DE3331930 A1	19840308	DE19833331930	19830905
FR2536670 A1	19840601	FR19830014186	19830906
FR2536670 B1	19880819	FR19830014186	19830906
GB2126116 A1	19840321	GB19830023711	19830905
GB2126116 B2	19860508	GB19830023711	19830905
GB8323711 A0	19831005	GB19830023711	19830905
JP59066301 A2	19840414	JP19830163108	19830905
US4511432 A	19850416	US19820415088	19820907
US5156706 A	19921020	US19880187817	19880429

Priority:

US19820415088 19820907 US19850689631 19850108 US19850728920 19850430
US19870065808 19870623 US19880187817 19880429

Probable Assignee: SEPHTON H H

Assignee(s): (std): SEPHTON H H ; SEPHTON HUGO ; SEPHTON HUGO H ; HIYUUGOO EICHI SHINPUSON ; SEPHTON HUGO

HENRY

Assignee(s): SEPHTON NANCY E TRUSTEE ; HUGO HENRY SEPHTON ; SEPHTON NANCY E
Inventor(s): (std): HIYUUGOO EICHI SHINPUSON ; SEPHTON HUGO H ; SEPHTON HUGO HENRY
Inventor(s): HUGO HENRY SEPHTON ; HENRY SEPHTON HUGO

50) Family number: 6216413 (EP0188856A1)

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Title: Gel and process for retarding fluid flow.

Abstract: A gel-forming composition is provided comprising a first substance selected from the group consisting of a polyvinyl alcohol, a polyvinyl alcohol copolymer, and mixtures thereof, with an aldehyde operable for crosslinking with the first substance, and water. The gel-forming composition is useful for filling voids in porous substances and for retarding the flow of fluids in high permeability channels in an oil reservoir. Such method is particularly useful in waterflood operations to increase the sweep efficiency of the oil recovery process. Since these gels have very good stability at elevated temperature they can be used in reservoirs having an average in situ temperature of 80 degrees centigrade or higher.

Classifications:

International (IPC 8-9): C08K5/07 C09K8/24
C09K8/512 (Advanced/Invention)

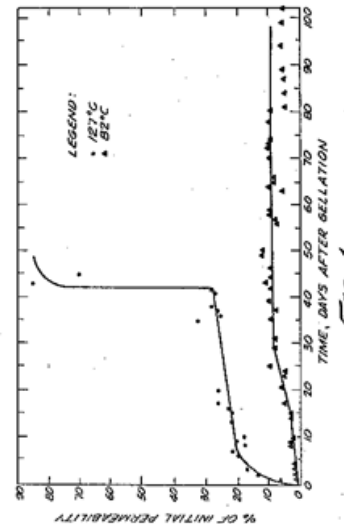
International (IPC 1-7): C08K5/07 C08L101/00 C08L29/04 C09K1/00
C09K7/00 C09K7/02 E21B33/00 E21B33/138

CPC: C08K5/07 C09K8/24 C09K8/512 C09K2208/18

European: C08K5/07 C09K8/24 C09K8/512 M09K208/18

PatBase - EP0188856_A1

0188856



Family:

Publication number	Publication date	Application number	Application date
EP0188856 A1	19860730	EP19850300365	19850118
IE850114 L	19860718	IE19850000114	19850118

Priority:

EP19850300365 19850118

Probable Assignee: CITIES SERVICE OIL AND GAS

Assignee(s): (std): CITIES SERVICE OIL AND GAS

Assignee(s): CITIES SERVICE OIL AND GAS CORP

Inventor(s): (std): ZILLMER ROGER CARROLL ; SANDIFORD BURTON BURNS ; MARROCCO MATTHEW L ; CHIOU CHII CHYOUNG

Designated states: IT

51) Family number: 47097421 (US2010258251A)

© PatBase

Title: SYSTEM INTEGRATION TO PRODUCE CONCENTRATED BRINE AND ELECTRICITY FROM GEOPRESSURED-GEOTHERMAL RESERVOIRS

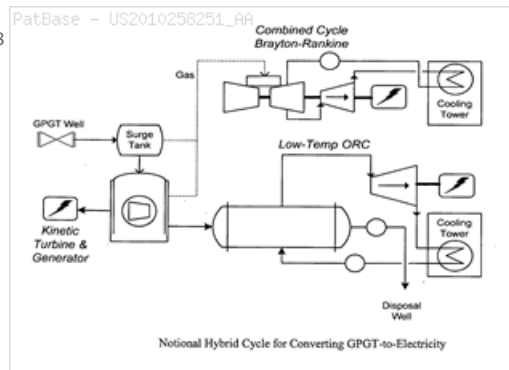
Abstract: A systems design is disclosed which converts Geopressured-Geothermal (GPGT) brine into saturated brine in concert with the production of electricity from GPGT brine energy. The design integrates a GPGT conversion system which super-concentrates a portion of the GPGT brine, utilizing that portion's thermal energy, with a system designed to produce electricity from the remainder of GPGT brine energy. The end-brine from the electricity producing system is concentrated (sub-saturated) in a spray evaporation pond, which serves as a heat sink for both systems, and is combined with the super-saturated product brine from the GPGT conversion system, resulting in a saturated brine end-product. The saturated brine can be used for beneficial purposes, including for use as bulk material in the construction of salinity gradient solar ponds (SGSP), which collect, store, and deliver solar thermal baseload power (e.g., for electricity generation).

Classifications:

International (IPC 8-9): B01D1/18 F03G4/00
H02K7/18 (Advanced/Invention)

CPC: Y02E10/36 F03G7/04 Y02E10/10

European: F03G7/00C Y02E10/10 Y02E10/36
US: 159/48.1 159/48.100P 290/52 290/52S 60/641.2 60/641.200S 60/648



Family:

Publication number	Publication date	Application number	Application date
US2010258251 AA	20101014	US20090653047	20091208
US8707697 BB	20140429	US20090653047	20091208

Priority:

US20080201088P 20081208 US20090653047 20091208

Probable Assignee: NITSCHKE GEORGE

Assignee(s): (std): NITSCHKE GEORGE

Inventor(s): (std): NITSCHKE GEORGE

Agent(s): LAMBERT AND ASSOCIATES; BAY STATE IP LLC

52) Family number: 29415423 (US4467786A)

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Title: SOLAR HEATING OF WATER UTILIZING COVERITES

Abstract: A method and a system of solar heating a body of water, which has its surface exposed to air and radiation from the sun, by covering the surface of the body of water with a floating blanket consisting of thousands of coverites. Each coverite is a sealed bag with its wall comprising a thin flexible translucent film of plastic, which encases a translucent liquid and a translucent gas, so that each coverite compresses its neighboring coverites, whereby its thin flexible wall conforms to the shape of the contacting part of the neighboring coverites' thin flexible walls, whereby the resulting blanket of coverites admits the solar radiation to reach the body of water, and reduces heat absorbing evaporation of the body of water to the air, and thermally insulates the body of water from the air. The liquid and the gas may conveniently be water and air respectively and the plastic may suitably be a polyolefin such as polyethylene.

Classifications:

International (IPC 8-9): F24J2/04 F24J2/36 F24J2/42

F24S90/00 (Advanced/Invention);

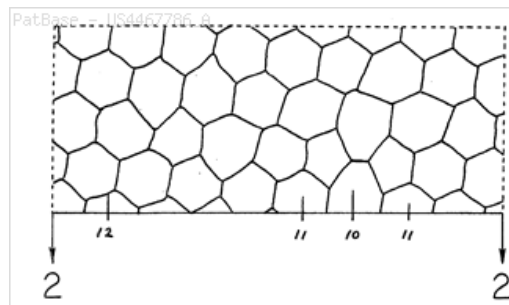
F24J2/04 F24J2/42 (Core/Invention)

International (IPC 1-7): F16L59/02 F24J2/36 F24J2/42 F24J3/02

CPC: Y02E10/40 F24S10/17 Y02E10/34 Y02E10/44

European: F24J2/04C4 Y02E10/34 Y02E10/40 Y02E10/44

US: 126/415 126/426 126/565 126/568 126/625 126/714 4/499



Family:

Publication number	Publication date	Application number	Application date
AT35453 E	19880715	AT19830302416T	19830428
AU198313817 A1	19841025	AU19830013817	19830420
AU565462 B2	19870917	AU19830013817	19830420
CA1223163 A1	19870623	CA19830427771	19830509
DE3377226 D1	19880804	DE19833377226	19830428
EP0123743 A1	19841107	EP19830302416	19830428
EP0123743 B1	19880629	EP19830302416	19830428
GB2109105 A1	19830525	GB19820016966	19820611
GB2109105 B2	19850612	GB19820016966	19820611
IN159030 A	19870314	IN1983CA00535	19830502
US4467786 A	19840828	US19830469562	19830302
US4582048 A	19860415	US19840644552	19840827

Priority:

US19810320484 19811112 US19820320484 19821112 US19830469562 19830302
AU19830013817 19830420 EP19830302416 19830428 CA19830427771 19830509
US19840644552 19840827

Probable Assignee: SOREN CHRISTIAN SORENSEN

Assignee(s): (std): SOERENSEN SOEREN CHRISTIAN ; SOREN CHRISTIAN SORENSEN ; SORENSEN J O ; SORENSEN JENS OLE

Assignee(s): SORENSEN RESEARCH AND DEVELOPMENT ; SORENSEN JENS O ; SORENSEN SOREN CHRISTIAN ;

SORENSEN JO ; SOREN CHRISTIAN SORENSEN A CITIZEN OF DENMARK ; SOREN CHRISTIAN SORENSEN A CITIZEN OF DENMARK BOX ; SOREN CHRISTIAN SORENSEN PO BOX ; JENS OLE SORENSEN

Inventor(s): (std): SORENSEN JENS O ; SORENSEN JENS OLE

Inventor(s): JENS OLE SORENSEN

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD

Designated states: AT BE CH DE FR LI NL SE

53) Family number: 33301425 (ES2257944B)

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Title: CELULA DESALINIZADORA POR DESTILACION A BAJA PRESION MEDIANTE EL EMPLEO DE UN SIFON HIDRAULICO.

Abstract: The hydraulic syphon based low pressure distillation desalination cell has flow between two containers, of sea surface water at 15-26 degrees centigrade depending on the time of year. The syphon is raised sufficiently to lower the water pressure to that of vaporization and incorporates a heat exchanger circulating cold below-surface sea water and serving as an additional independent syphon. EMBODIMENT - The resulting condensate is delivered to a third container located level with the other two containers via a tube.

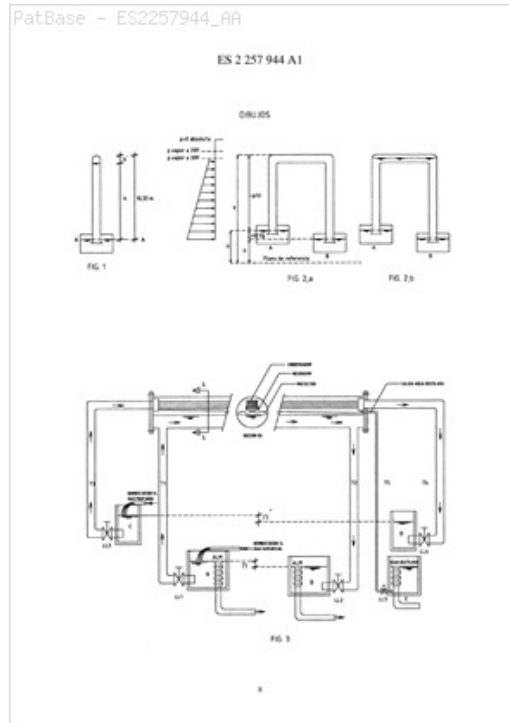
Classifications:

International (IPC 8-9): C02F1/04 (Advanced/Invention);

C02F1/04 (Core/Invention)

CPC: Y02A20/128 C02F1/04

European: C02F1/04



Family:

Publication number	Publication date	Application number	Application date
ES2257944 AA	20060801	ES20040002504	20041014
ES2257944 BA	20070601	ES20040002504	20041014

Priority:

ES20040002504 20041014

Probable Assignee: SAENZ DE URTURI MONTEMAYOR JOS

Assignee(s): (std): SAENZ DE URTURI MONTEMAYOR JOS

Assignee(s): SAENZ DE URTURI MONTEMAYOR JOSE LUIS

Inventor(s): (std): SAENZ DE URTURI MONTEMAYOR JOS

Inventor(s): SAENZ DE URTURI MONTEMAYOR JOSE LUIS

54) Family number: 7528427 (US4169050A)

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Title: BUOYANT CONTACT SURFACES IN WASTE TREATMENT POND

Abstract: A wastewater treatment and reclamation system using natural ecological processes consisting of ponds; greenhouse pond cover; pollution-consuming, floating aquatic plants; high-surface-area, submerged, activated bio-web substrates for greatly increasing fixed bacterial film area and activity; aeration co-functioning with the bio-web substrate for accelerating bacterial metabolism and/or solar heat transfer, mixing and aerating the water body; and a polyculture of micro-invertebrates, fish and shellfish providing a balanced food chain for maximum removal and bio-concentration of nutrients and organics from the wastewater.

Classifications:

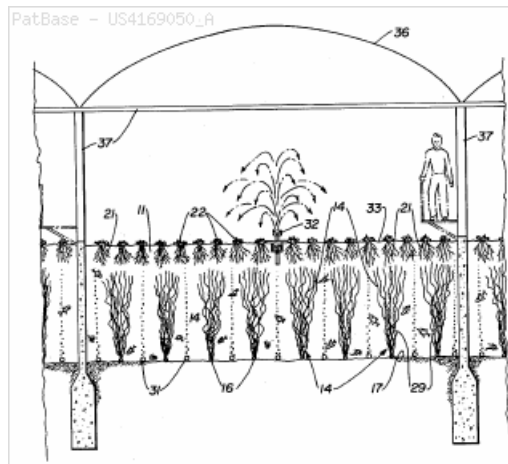
International (IPC 8-9): A01G31/00 A01K63/04 C02F3/10

C02F3/32 (Advanced/Invention);

A01G31/00 A01K63/04 C02F3/10 C02F3/32 (Core/Invention)

International (IPC 1-7): C02B1/28

CPC: Y02W10/18 Y02W10/37 A01K63/04 A01G31/00 C02F3/10 C02F3/327 Y02W10/15
European: A01G31/00 A01K63/04 C02F3/10 C02F3/32B
US: 119/227 119/228 119/233 210/12 210/150 210/170.08 210/170.09 210/220 210/242.1 210/602 210/603 210/612 210/615 210/747 210/747.9



Family:

Publication number	Publication date	Application number	Application date
US4169050 A	19790925	US19770848092	19771103

Priority:

US19770848092 19771103

Probable Assignee: SOLAR AQUASYSTEMS INC

Assignee(s): (std): SOLAR AQUASYSTEMS INC

Inventor(s): (std): MENDOLA DOMINICK ; SERFLING STEVEN A

55) Family number: 52824434 (US2013019577A)

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Title: SYSTEM AND METHOD FOR CAPTURING GASES FROM EXHAUST

Abstract: In one example, we discuss the capture of the gases as byproducts, for future/other purposes, coming from conventional power generators or factories or from algae biofuel production facility (or any other similar sources). This increases the energy production, saves the environment, conserves the resources, improves the air quality, reduces the global warming, increases water supply, reduces the cost, and improves agriculture and food resources, around the globe. In one example, we discuss the biofuel production, method, and system.

Classifications:

International (IPC 8-9): B01D45/16 B01D46/42 B01D5/00

C12M1/42 (Advanced/Invention)

CPC: B01D45/16 B01D46/42 B01D2256/20 B01D2256/22 B01D2257/80

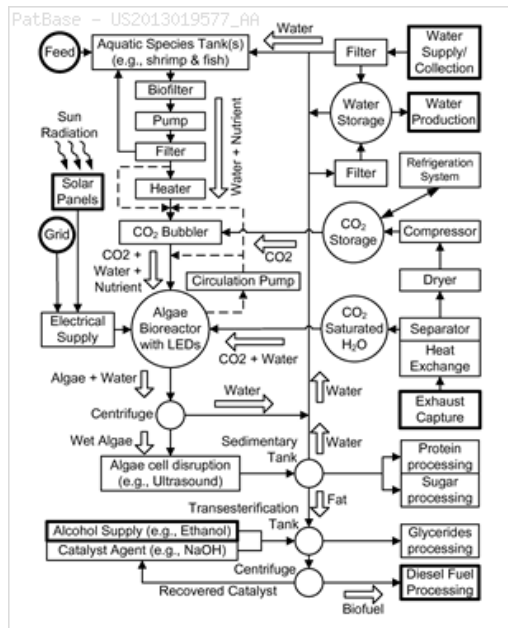
B01D2258/0283 B01D53/265 C12M21/02 C12M31/10 C12M43/00

C12M47/06 B01D53/62 B01D53/84 B01D2251/95 B01D2257/502

B01D2257/504 B01D2259/802 Y02C10/02 Y02C10/04 Y02P20/59

Y02A50/2358

US: 435/292.1 55/385.1 55/385.7 96/221



Family:

Publication number	Publication date	Application number	Application date
US2013019577 AA	20130124	US20120620722	20120915
US2013019753 AA	20130124	US20120620731	20120915
US2013023044 AA	20130124	US20120541265	20120703

Priority:

US20110509119P 20110719
US20120620731 20120915

US20120541265 20120703

US20120620722 20120915

Probable Assignee: JAGS LLC

Assignee(s): (std): GLEASON CORNEL
Assignee(s): JAGS LLC
Inventor(s): (std): GLEASON CORNEL

56) Family number: 4513457 (US4475535A)

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Title: SEGREGATED SOLAR POND

Abstract: A segregated solar pond includes an upper level of water overlying a lower level of water, and an impermeable barrier interposed between the two levels for preventing intermixing. The average density of the upper level exceeds the average density of the upper level. Floats on the periphery of the upper level buoyantly support it on the surface of a larger body of water connected to the lower level. The upper level contains dissolved salts establishing a halocline that renders the upper level non-convective such that it is heated by absorption of solar radiation, the heat being transferred to the lower level by conduction across the barrier. Vertical curtains attached to the periphery of the barrier inhibit mixing of the water in the lower level with the water in the larger body of water such that the lower level constitutes a heat storage layer. The barrier between the two layers includes a sheet of flexible material and a frame supporting the same rigidly connected to the floats. The upper level is stabilized by additional floats rigidly connected to the frames and floating in the upper level.

Classifications:

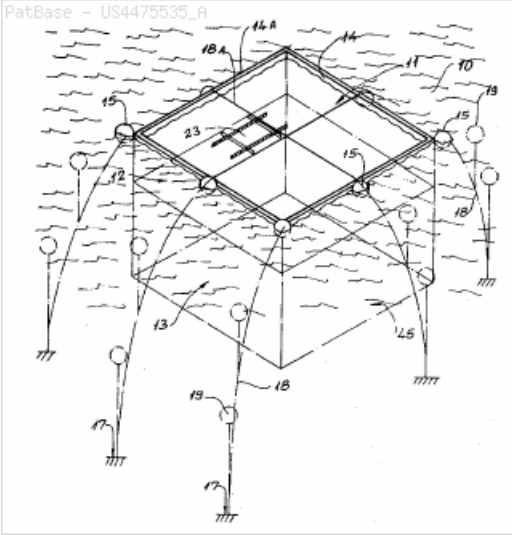
International (IPC 8-9): F24J2/04 (Advanced/Invention);
F24J2/04 (Core/Invention)

International (IPC 1-7): F24J3/02

CPC: F24S10/13 Y02E10/44

European: F24J2/04C2 Y02E10/44

US: 126/415 126/430 126/437 126/452 126/568 126/640 165/1 165/45
60/641.13 60/641.8



Family:

Publication number	Publication date	Application number	Application date
US4475535 A	19841009	US19800134659	19800327

Priority:

US19800134659 19800327

Probable Assignee: SOLMAT SYST
Assignee(s): (std): SOLMAT SYST
Assignee(s): SOLMAT SYSTEMS LTD
Inventor(s): (std): ASSAF GAD

57) Family number: 50906470 (NL1038205C)

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Title: RE-EXCHANGE ENERGY-SAVING BUILDING SYSTEM.

Abstract: A RE-EXCHANGE ENERGY-SAVING BUILDING SYSTEM IN WHICH BUILDING POWER SUPPLY SYSTEM ALLOWS TO SUPPLY WATER FROM TOP FLOOR POND TO THE CAPILLARY GENERATOR SET; THE ELECTRIC ENERGY GENERATED BY CAPILLARY GENERATOR SET IS SUPPLIED TO THE USER LOAD, AND THE ELECTRIC ENERGY GENERATED BY SOLAR PV IS SUPPLIED TO THE WATER PUMP TO TRANSFER WATER FROM THE BASEMENT POND TO THE TOP FLOOR POND; THE VALLEY LOAD IN THE UTILITY POWER GRID IS SUPPLIED TO THE WATER PUMP TO TRANSFER WATER FROM THE BASEMENT POND TO THE TOP FLOOR POND. A PARALLEL CONNECTION OF SOLAR WATER HEATERS, THE HOT WATER SUPPLY SYSTEM FOR THE BUILDING CAN PROVIDE HOT WATER TO THE BUILDING AT ANY TIME. THE AIR CONDITIONERS FOR THE BUILDING ENABLE HEATING AND COOLING VIA GSHP. THE WATER-SAVING SYSTEM PERMITS A MEMBRANE FILTER TANK TO FILTER THE BATH WATER AND DOMESTIC WATER AND THEN SUPPLY TO THE FLUSH TOILET AT LOWER FLOOR. DIT OCTROOI IS VERLEEND ONGEACHT HET BIJGEVOEGDE RESULTAAT VAN HET ONDERZOEK NAAR DE STAND VAN DE TECHNIEK EN SCHRIFTELIJKE OPINIE. HET OCTROOISCHRIFT KOMT OVEREEN MET DE OORSPRONKELIJK INGEDIENDE STUKKEN.

Classifications:

International (IPC 8-9): F03B13/00 F03B13/06 (Advanced/Invention)

CPC: Y02B10/70 Y02E10/22 Y02E60/17 F03B13/06 F03B13/00
F05B2220/602 F05B2220/708 F05B2240/91 F05B2240/9112 Y02B10/50

European: F03B13/00 F03B13/06 R05B220/602 R05B220/708
R05B240/91 R05B240/9112 Y02B10/50

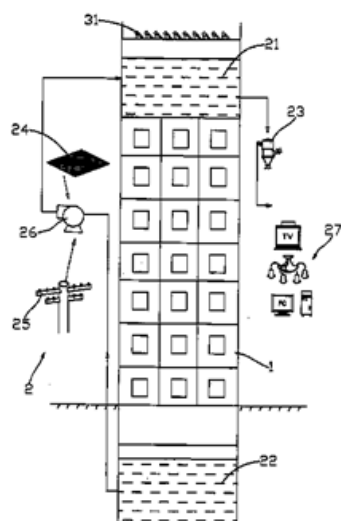


Fig. 1

1038205

Family:

Publication number	Publication date	Application number	Application date
NL1038205 C	20120228	NL20101038205	20100827
NL1038205 C2	20120228	NL20101038205	20100827

Priority:

NL20101038205 20100827

Probable Assignee:

ZHEJIANG JIEER SAVING COAL CO

Assignee(s): (std):

ZHEJIANG JIEER SAVING COAL CO

Assignee(s):

ZHEJIANG JIEER SAVING COAL CO LTD

Inventor(s): (std):

PINLIANG FAN

58) Family number: 5397481 (WO9004046A1)

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Title: CORROSION INHIBITION OF SODIUM AND CALCIUM CHLORIDE

Abstract: There is disclosed a corrosion inhibited sodium and calcium chloride composition preferably in granular form, which is uniformly coated with a minute to minor quantity of an inhibitor comprising chiefly superphosphate and a minor amount of magnesium oxide or hydroxide. There is also disclosed a method for inhibiting corrosion of sodium and calcium chloride which comprises supplying to the metal surface which is exposed to corrosive attack by sodium and calcium chloride, a minute quantity of an inhibitor comprising chiefly superphosphate and a minor amount of magnesium oxide or hydroxide. The magnesium oxide or hydroxide functions to cement the inhibitor as a tenacious coating on the salt granules, and also to enhance the effectiveness of the phosphate corrosion inhibition.

Classifications:**International (IPC 8-9):** C09K3/18 C23F11/18 (Advanced/Invention);

C09K3/18 C23F11/08 (Core/Invention)

International (IPC 1-7): C23F11/08**CPC:** C09K3/185 C23F11/188**European:** C09K3/18B C23F11/18M2**Family:**

Publication number	Publication date	Application number	Application date
WO9004046 A1	19900419	WO1988US03557	19881012

Priority:

WO1988US03557 19881012

Probable Assignee:

MURRAY W BRUCE

Assignee(s): (std):

MURRAY W BRUCE

Assignee(s):

MURRAY W

Inventor(s): (std):

MURRAY W BRUCE

Inventor(s):

MURRAY W

Designated states:

AT BE CH DE DK FR GB IT LU NL NO SE SU US

Abstract: The present invention seeks to improve beneficiation of a titanium oxide-containing composition (such as a low-grade or highly radioactive TiO_2 ore) by combining a roasting and selective leaching steps.

International (IPC 8-9): B22D11/10 C01B13/14 C01B15/14 C01B33/00 C01B33/12 C01B33/20 C01F3/00 C01F7/02 C01F7/06 C01F7/14 C01F7/38 C01G15/00 C01G23/00 C01G23/04 C01G23/047 C01G25/02 C01G27/02 C01G49/02 C01G49/06 C21B11/10 C21B13/00 C21B15/00 C21B3/04 C21B7/14 C22B1/02 C22B11/10 C22B21/00 C22B3/04 C22B3/44 C22B34/12 C22B5/20 C22B7/00 C22B7/04 C22B9/00 (Advanced/Invention); C21C7/04 C22B5/10 C22B7/00 (Advanced/Non-invention); C01B33/00 C01F7/00 C01G23/00 C01G49/02 C22B1/00 C22B21/00 C22B3/00 C22B34/00 C22B7/00 C22B7/04 (Core/Invention); C21C7/04 C22B5/00 C22B7/00 (Core/Non-invention); C01F C01G C22B (Subclass/Invention)

CPC: C01G23/04 C22B34/1236 C01F7/142 C01F7/38 C01G49/06
C22B5/10 C22B7/04 C22B21/0038 C22B34/1259 Y02P10/23 Y02P10/214
Y02P10/218 Y02P10/224 C01G23/047 C22B1/02 C22B34/1209
C01G23/0475 C01P2002/85 C01P2006/60 C22B34/1213 C22B34/1222

US: 423/111 423/138 423/324 423/325 423/335 423/339 423/592.1
423/598 423/608 423/610 423/624 423/625 423/632 423/633 423/80
423/82 423/84 423/86 75/10.25 75/10.26 75/392 75/414 75/434 75/435
75/500 75/506 75/507 75/571 75/582 75/584



Publication number	Publication date	Application number	Application date
AU2004249473 AA	20041229	AU20040249473	20040611
AU2004249473 BB	20100819	AU20040249473	20040611
AU2004274226 AA	20050331	AU20040274226	20040914
AU2004274226 BB	20100304	AU20040274226	20040914
BRPI0411463 A	20061107	BR2004PI11463	20040611
BRPI0411463 B1	20160628	BR2004PI11463	20040611
BRPI0414516 A	20071204	BR2004PI14516	20040914
BRPI0414516 B1	20160621	BR2004PI14516	20040914
CA2529249 AA	20051213	CA20042529249	20040611
CA2529249 C	20120828	CA20042529249	20040611
CA2539537 AA	20050331	CA20042539537	20040914
CA2539537 C	20121127	CA20042539537	20040914
CN100567165 C	20091209	CN200480016733	20040611
CN1805903 A	20060719	CN200480016733	20040611
CN1852864 A	20061025	CN200480026932	20040914
EP1633679 A1	20060315	EP20040736662	20040611
EP1633679 B1	20190313	EP20040736662	20040611
EP1663871 A1	20060607	EP20040768471	20040914
EP1663871 B1	20181107	EP20040768471	20040914
ES2709399 T3	20190416	ES20040768471T	20040914
GB200313886 A0	20030723	GB20030013886	20030616
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IN00406KN2006 A	20070413	IN2006KN00406	20060222
IN02441KN2005 A	20061013	IN2005KN02441	20051201
IN238942 B	20100305	IN2006KN00406	20060222
IN267224 B	20150710	IN2005KN02441	20051201
JP2006527698 T2	20061207	JP20060516420T	20040611
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JP2012121798 A2	20120628	JP20110275827	20111216
JP5142524 B2	20130213	JP20060526683T	20040914
JP5603317 B2	20141008	JP20110275827	20111216
TR201818410 T4	20181221	TR20180018410T	20040914
US2007110647 AA	20070517	US20040571038	20040914
US2009311154 AA	20091217	US20040560515	20040611
US7771679 BB	20100810	US20040571038	20040914
US8834600 BB	20140916	US20040560515	20040611
WO04113230 A1	20041229	WO2004GB02543	20040611
WO05028369 A1	20050331	WO2004GB03925	20040914
WO05028369 B1	20050519	WO2004GB03925	20040914
ZA200509579 A	20061129	ZA20050009579	20051128
ZA200601805 A	20070530	ZA20060001805	20040914

Priority:

GB20030013886 20030616 GB19320018450 20030918 GB20030018450 20030918
GB20030021845 20030918 GB20320018450 20030918 JP20060516420 20040611
WO2004GB02543 20040611 EP20040768471 20040914 WO2004GB03925 20040914

Probable Assignee: LEEDS UNIV OF**Assignee(s):** (std): JHA ANIMESH ; MALPAN PAILO ANTONY ; TATHAVADKAR VILAS ; TATHAVADKAR VILAS D ; UNIV LEEDS ; TATHAVADKAR VILAS DATTATRAY ; UNIVERISITY OF LEEDS ; THE UNIVERSITY OF LEEDS ; URQUHART DYKES AND LORD LLP ; UNIV OF LEEDS ; UNIV LEEDS INNOVATIONS LTD**Assignee(s):** THE UNIVERISITY OF LEEDS ; OF LEEDS UNIV ; LEEDS UNIV ; LEEDS UNIV OF**Inventor(s):** (std): PAILO ANTONY MALPAN ; TATHAVADKAR VILAS D ; TATHAVADKAR VILAS DATTATRAY ; VILAS DATTATRAY TATHAVADKAR ; VILAS TATHAVADKAR ; TATHAVADKAR VILAS ; ANIMESH JHA ; DATTATRAY JHA ANIMESH TATHAVAD ; JHA ANIMESH ; VILAS JHA ANIMESH MALPAN PAILO ; MALPAN PAILO ANTONY ; DATTATRAY TATHAVADKAR VILAS ; ANTONY MALPAN PAILO**Inventor(s):** JHA ANIMESH MALPAN PAILO ANTONY TATHAVADKAR VILAS ; JHA ANIMESH TATHAVADKAR VILAS DATTATRAY ; MALPAN PAILO ANTONY SCIENTIFIC OFFICER G ; ATHAVADKAR VILAS DATTATRAY**Agent(s):** GRIFFITH HACK ; SMART AND BIGGAR ; SIM AND MCBURNEY ; STUTTARD GARRY PHILIP ; CARPINTERO MARIO ; OSAKI KATSUMASA ; TSUBOKURA MICHIAKI ; KANAYAMA MASATAKA ; KAWAGUCHI YOSHIO ; ONO MAKOTO ; HALISE BETUEL ATABAY VARLIK ; FOLEY HOAG LLP, PATENT GROUP WORLD TRADE CENTER WEST ; FOLEY HOAG LLP PATENT GROUP WORLD TRADE CENTER WEST ; FOLEY HOAG LLP ; DUNLAP CODDING PC**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 KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**60) Family number: 3503514 (US4498540A)**

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Title: Gel for retarding water flow

Abstract: A polyvinyl alcohol-aldehyde gel having a high water content and low degree of crosslinking is provided which has improved stability. The gel can be used to retard the flow of water in subterranean formation encountered in hydrocarbon production. One embodiment of the invention provides a method of forming the gel in-situ in the pores of subterranean zones thereby retarding or blocking the flow of water therein.

Classifications:**International (IPC 8-9):** B01J13/02 C08F8/28 C09K8/12 C09K8/50 C09K8/512 C09K8/588 C09K8/60 C09K8/72 C09K8/88

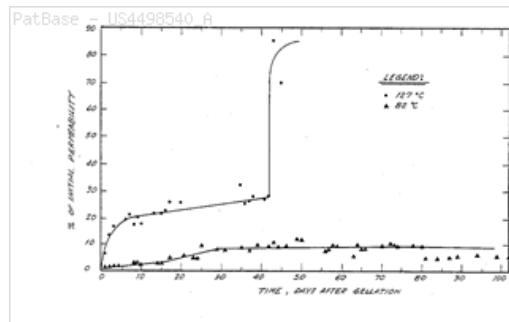
E21B43/22 (Advanced/Invention);

B01J13/02 C08F8/00 C09K8/02 C09K8/50 C09K8/58 C09K8/60 (Core/Invention)

International (IPC 1-7): B01F17/00 B01J13/02 C08F261/04 C08F8/28 C08J3/24 C08L29/04 C09K7/00 C09K7/02 E21B33/138 E21B43/00 E21B43/12 E21B43/22 E21B43/24 E21B43/25**CPC:** C09K8/5083 C09K8/512 C09K8/592 C09K8/76 C09K2208/18 C09K8/92 C09K8/594 C09K8/60 C09K8/72 C09K8/50 Y10S507/903 Y10S507/935 C09K8/12 C09K8/508 C09K8/588 C09K8/685 C09K8/887**European:** C09K8/508 C09K8/508B C09K8/512 C09K8/588 C09K8/592 C09K8/594 C09K8/68B C09K8/76 C09K8/88C C09K8/92 M09K208/18**US:** 166/270 166/272.5 166/273 166/281 166/288 166/294 166/295

166/300 166/308.1 166/309 175/72 252/8.512 252/8.554 405/264

405/270 507/103 507/124 507/230 507/268 507/903 507/935 523/130 524/557 525/383 525/60 525/61

**Family:**

Publication number	Publication date	Application number	Application date
AT122708 E	19950615	AT19850900903T	19850117
AU198430775 A1	19850124	AU19840030775	19840717
CA1228227 A1	19871020	CA19840459031	19840717
CA1244584 A1	19881108	CA19840459114	19840718
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CA1254337 A1	19890516	CA19840459111	19840718
CA1258734 A1	19890822	CA19840459115	19840718
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CA1282526 A1	19910402	CA19840459112	19840718
DE3588019 D1	19950622	DE19853588019	19850117
EP0186663 A1	19860709	EP19850900903	19850117
EP0186663 A4	19870305	EP19850900903	19850117
EP0186663 B1	19950517	EP19850900903	19850117
GB2145420 A1	19850327	GB19840018204	19840717
GB2145420 B2	19870528	GB19840018204	19840717
GB8418204 A0	19840822	GB19840018204	19840717
NO178903 B	19960318	NO19860000682	19860224
NO178903 C	19960626	NO19860000682	19860224
NO860682 A	19860224	NO19860000682	19860224
NO860682 L	19860224	NO19860000682	19860224
US4498540 A	19850212	US19830514557	19830718
US4643255 A	19870217	US19850810939	19851218
US4664194 A	19870512	US19850693680	19850122
US4665986 A	19870519	US19860822118	19860124
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US4666957 A	19870519	US19840662360	19841018

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US4939203 A	19900703	US19880227089	19880801
WO8600330 A1	19860116	WO1985US00100	19850117

Priority:

US19820514557 19820718	US19830514557 19830718	US19830514557 19830718
US19840623915 19840625	US19840623916 19840625	US19840623917 19840625
US19840624035 19840625	US19840624111 19840625	US19840624113 19840625
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CA19840459115 19840718	CA19840459113 19840718	CA19840459114 19840718
CA19840459116 19840718	US19840662360 19841018	WO1985US00100 19850117
US19850693680 19850122	US19850810939 19851218	US19860822118 19860124
US19860822479 19860124	US19860822120 19860124	US19860822156 19860124
US19870027723 19870319	US19880227089 19880801	

Probable Assignee: CITIES SERVICE OIL AND GAS CORP

Assignee(s): (std): CHIOU CHII SHYOUNG ; CITIES SERICE OIL AND GAS CORP ; CITIES SERVICE OIL AND GAS ; CITIES SERVICE OIL AND GAS COR ; SANDIFORD BURTON B ; CITIES SERVICE OIL AND GAS CORP ; OXY USA INC

Assignee(s): OXY USA INC TULSA OKLA US ; MARROCCO MATTHEW L ; ZILLMER ROGER C ; ZILLMER ROGER CARROLL ; SANDIFORD BURTON BURNS ; OCCIDENTAL RESEARCH CORP ; CITIES SERVICE OIL AND GAS 110 WEST SEVENTH STREET

Inventor(s): (std): ZILLMER ROGER ; SANDIFORD BURTON ; MARROCCO MATTHEW L ; MARROCCO MATTHEW ; CHIOU CHII SHYOUNG ; SHYOUNG CHII ; CHIOU CHII CHYOUNG ; SANDIFORD BURTON B ; SANDIFORD BURTON BURNS ; MARROCCO MATHEW L ; MARRICCI MATTHEW L ; CHIOU CHII SHYOUNG ; ZILLMER ROGER C ; ZILLMER ROGER CARROLL

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Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; SMART AND BIGGAR

Designated states: AT BE BR CH DE DK FI FR GB LI LU NL NO SE

61) Family number: 2325521 (IL94252A1)

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Title: METHOD OF AND MEANS FOR CONTROLLINGTHE CONDITION OF AIR IN AN ENCLOSURE

Abstract: 1. Apparatus for controlling the condition of air in an enclosure comprising: a) a brine dehumidifier to which concentrated brine is supplied from a reservoir and from which diluted brine is obtained; b) means for recirculating air in the enclosure through said brine dehumidifier; c) a boiler, associated with said reservoir, fired by a combustible fuel that produces carbon dioxide and water vapor, for adding heat to the diluted brine, including means for concentrating said diluted brine and producing steam; d) a heat exchanger associated with the enclosure for receiving steam produced by said boiler; and e) heat storage means to store heat contained in said steam, and selectively operable means for directing said heat in said steam either to said heat storage means or to said heat exchanger.

Classifications:

International (IPC 8-9): A01G9/24 F24J2/32

F24S10/95 (Advanced/Invention);

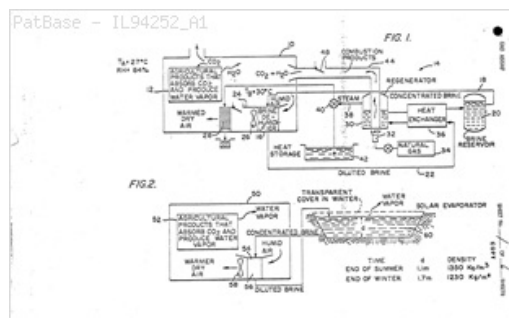
A01G9/24 F24J2/04 (Core/Invention);

F24F (Subclass/Invention)

International (IPC 1-7): A01G9/24 F24J2/32

CPC: Y02E10/44 Y02A40/268

European: Y02E10/44



Family:

Publication number	Publication date	Application number	Application date
IL73162 A0	19850131	IL19840073162	19841004
IL73162 A1	19901105	IL19840073162	19841004
IL94252 A0	19910310	IL19900094252	19900501
IL94252 A1	19930922	IL19840094252	19841004

Priority:

IL19840073162 19841004	IL19900094252 19900501
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Probable Assignee: ASSAF GAD

Assignee(s): (std): ASSAF GAD

Assignee(s): GAD ASSAF ; ORMAT IND LTD

Agent(s): WOLFF BREGMAN AND GOLLER

62) Family number: 29537530 (US5397474A)

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Title: TREATMENT OF WASTES

Abstract: PCT No. PCT/AU91/00587 Sec. 371 Date Jun. 18, 1993 Sec. 102(e) Date Jun. 18, 1993 PCT Filed Dec. 19, 1991 PCT Pub. No. WO92/11210 PCT Pub. Date Jul. 9, 1992. A process for treatment of biological waste includes passing biological waste liquid downwardly through at least one substantially vertically oriented curtain having a reinforcing layer of support material. Attached thereto is at least one layer of flexible reticulated open cellular material having a plurality of communicating cells which form a support for filamentous micro-organisms and/or symbionts included in the filamentous micro-organisms. The filamentous micro-organisms and/or symbionts form a dense mat of cellular material adhering to the support. The biological waste is collected after passage through the curtain for ultimate disposal.

Classifications:

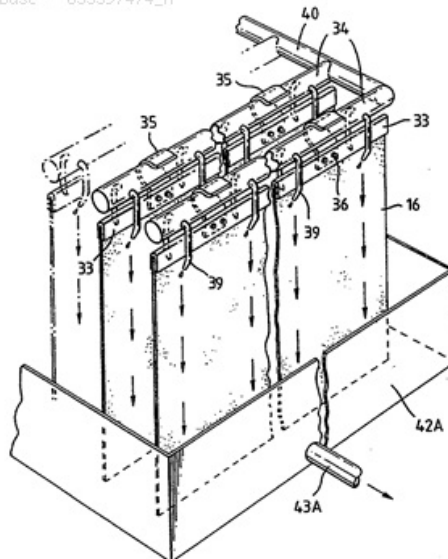
International (IPC 8-9): B01F3/04 C02F3/00 C02F3/02 C02F3/04 C02F3/10 C02F3/24 C02F3/30 (Advanced/Invention); B01F3/04 C02F3/00 C02F3/02 C02F3/04 C02F3/10 C02F3/24 C02F3/30 (Core/Invention)

International (IPC 1-7): C02F3/00 C02F3/02 C02F3/04 C02F3/10 **CPC:** Y02W10/15 C02F3/103 B01F3/0473 B01F3/04744 C02F3/04 C02F3/10 C02F3/24 C02F3/30

European: B01F3/04C6 B01F3/04C6A2 C02F3/04 C02F3/10 C02F3/10E C02F3/24 C02F3/30

US: 210/150 210/615

PatBase - US5397474_A



Family:

Publication number	Publication date	Application number	Application date
AT181902 E	19990715	AT19910901926T	19911219
AU199191080 A1	19920722	AU19910091080	19911219
AU649509 B2	19940526	AU19910091080	19911219
CA2098088 AA	19930609	CA19912098088	19911219
DE69131430 D1	19990812	DE19916031430	19911219
EP0579603 A1	19940126	EP19920901926	19911219
EP0579603 A4	19940427	EP19920901926	19911219
EP0579603 B1	19990707	EP19920901926	19911219
JP6508057 T2	19940914	JP19920501613T	19911219
KR19930703211 A	19931129	KR19930701883	19911219
US5397474 A	19950314	US19930078306	19930618
WO9211210 A1	19920709	WO1991AU00587	19911219

Priority:

AU1990PK03985 19901219 AU19910091080 19911219 WO1991AU00587 19911219

Probable Assignee: FUNGI GULP PTY LTD

Assignee(s): (std): FUNGI GULP PTY LTD ; UNIV QUEENSLAND ; THE UNIVERSITY OF QUEENSLAND

Assignee(s): QUEENSLAND UNIV ; QUEENSLAND UNIV OF THA ; FUNGI GULP PTY LTD CLIFTON QUEENSLAND AU ; FUNGI GULP PTY LTD ; HENRY DICK P ; OF QUEENSLAND ST LUCIA QUEENSLAND UNIV ; OF QUEENSLAND UNIV

Inventor(s): (std): HENRY DICK PETER ; HENRY DICK ; DICK PETER HENRY ; HENRY DICK P ; HENRY PETER D

Inventor(s): HENRY DICK PETER BROOKFIELD QLD 4069 AU

Agent(s): FISHER AND KELLY; GOWLING LAFLEUR HENDERSON LLP

Designated states: AT AU BB BE BF BG BJ BR CA CF CG CH CI CM CS DE DK ES FI FR GA GB GN GR HU IT JP KP KR LI LK LU MC MG ML MN MR MW NL NO PL RO SD SE SN SU TD TG US

63) Family number: 8661533 (US4363703A)

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Title: THERMAL GRADIENT HUMIDIFICATION-DEHUMIDIFICATION DESALINATION SYSTEM

Abstract: A solar energy desalination process utilizing solar radiation directly for the evaporation of salt water is described. Ambient air takes on water vapor as the air passes through an evaporative medium. It is then directed between a saline water-covered, solar absorbing surface and a solar collecting housing. The resulting heated and moisture-saturated air is cooled in a heat exchange means where condensation of fresh water occurs. Simultaneously, cool salt water is utilized as the cooling water in the heat exchange means, and takes on the heat of condensation given up by the condensing vapor. The heated salt water from the heat exchange means is partially directed over the solar absorbing surface, and at least a portion of it is also directed to wet the evaporative medium. Several optional sub-processes are described for operation of the system during periods of reduced insolation, and an alternative process is described for operation of the process on a floating platform.

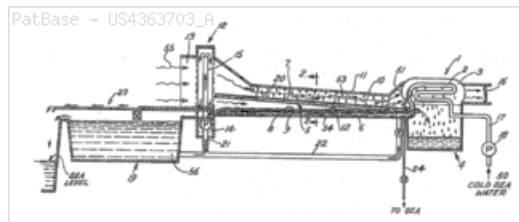
Classifications:

International (IPC 8-9): B01D3/34 C02F1/14 (Advanced/Invention); B01D3/34 C02F1/14 (Core/Invention)

International (IPC 1-7): C02F1/14

CPC: Y10S159/904 Y10S203/01 Y10S203/11 B01D3/346 C02F1/14 Y02W10/37 F28C3/08 Y02E10/44 Y02A20/128 Y02A20/129 Y02A20/142

Y02A20/212 F24S10/20 F24S10/60
European: B01D3/34B2 C02F1/14
US: 159/904 202/172 202/180 202/233 202/234 202/236 203/10 203/100
203/22 203/49 203/89 203/DIG.1



Family:

Publication number	Publication date	Application number	Application date
US4363703 A	19821214	US19800204560	19801106

Priority:

US19800204560 19801106

Probable Assignee: OF GAS TECHNOLOGY INST

Assignee(s): (std): INST GAS TECHNOLOGY

Assignee(s): INSTITUTE OF GAS TECHNOLOGY ; OF GAS TECHNOLOGY A NOT FOR PROFIT ORGANIZATION OF ; OF GAS TECHNOLOGY INST

Inventor(s): (std): BLAZEK CHRISTOPHER F ; ELDIFRAWI AHMED A ; YUDOW BERNARD D

64) Family number: 29350533 (US4402908A)

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Title: METHOD FOR REDUCING HEAT LOSS FROM CONTAINED BODIES OF WATER USING POLYSILOXANE FOAMS

Abstract: Heat loss and evaporation from contained bodies of water are reduced by generating a cured polysiloxane foam on the surface of the water. The foam is formed by reacting an organohydrogenpolysiloxane with the water in the presence of a rhodium catalyst or an inhibited or chelated platinum catalyst.

Classifications:

International (IPC 8-9): B01J19/16 C02F1/00 C02F1/14 C08J9/02

C08J9/04 C09K3/32 F24J2/04 (Advanced/Invention);

B01J19/16 C02F1/00 C02F1/14 C08J9/00 F24J2/04 (Core/Invention)

International (IPC 1-7): B01J19/16 B01J8/16 B65D88/34 B65D90/42

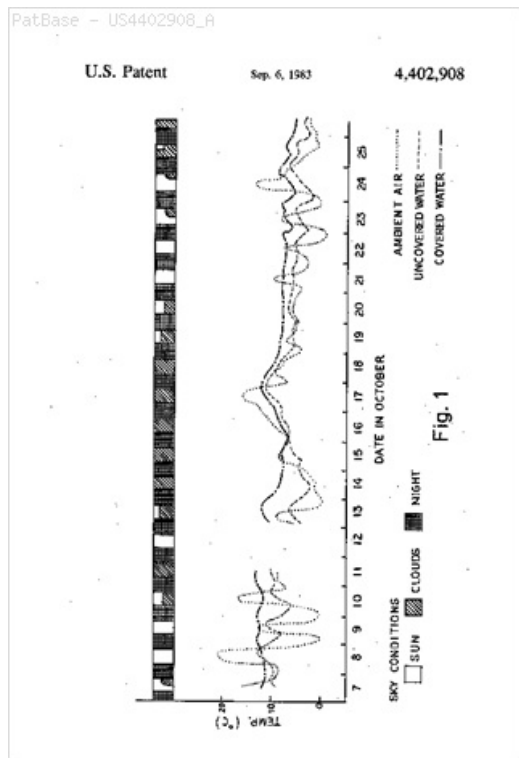
C07F7/08 C08F2/16 C08G77/38 C08J9/02 C08J9/04 C09K3/32 C09K5/00

F24H9/02 F24J2/50 F24J3/02

CPC: Y02A20/212 B01J19/16 C02F1/00 Y02E10/44 F24S10/10 C02F1/14

European: B01J19/16 C02F1/00 C02F1/14 F24J2/04C Y02E10/44

US: 252/382 252/383 252/384 422/43



Family:

Publication number	Publication date	Application number	Application date
AU198316254 A1	19840105	AU19830016254	19830624
AU554824 B2	19860904	AU19830016254	19830624
BR8303396 A	19840207	BR19830003396	19830624
CA1195836 A1	19851029	CA19830428392	19830518
DE3362273 D1	19860403	DE19833362273	19830601
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EP0098053 B1	19860226	EP19830303130	19830601
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ES523488 A2	19840622	ES19830523488	19830622
ES8405501 A1	19840601	ES19830523488	19830622
IL68966 A0	19831031	IL19830068966	19830613
IL68966 A1	19860429	IL19830068966	19830613

JP1682394 C3	19920731	JP19830114144	19830624
JP3047142 B4	19910718	JP19830114144	19830624
JP59008735 A2	19840118	JP19830114144	19830624
MX162444 A	19910510	MX19830197800	19830624
US4402908 A	19830906	US19820392420	19820625
ZA8303951 A	19840425	ZA19830003951	19830601

Priority:

US19820392420 19820625 CA19830428392 19830518

Probable Assignee: DOW CORNING A CORP OF MI CORP

Assignee(s): (std): DOW CORNING

Assignee(s): DOW CORNING A CORP OF MI CORP ; DOW CORNING CORP ; LEE CHI LONG ; RABE JAMES A ; CIBA GEIGY CORP

Inventor(s): (std): ALAN RABE JAMES ; CHI LONG LEE ; CHIIRONGU RII ; JAMES ALAN RABE ; JEEMUSU ARAN RABE ; JIEEMUSU ARAN RABE ; LEE CHI LONG ; RABE JAMES A ; RABE JAMES ALAN

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; GOWLING LAFLEUR HENDERSON LLP; DR YITZHAK HESS AND PARTNERS

Designated states: BE DE FR GB IT NL

65) Family number: 9265538 (JP62123260A)

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Title: DIAPHRAGM OF SOLAR POND

Abstract: PURPOSE:To make it possible to prevent the wave of a convection layer from generating and also a stirring phenomenon at the time of water supply from occurring and restore the light permeability of the diaphragm by disposing in contact with each other a plurality of pipes provided with water supply and drain ports opening toward the longitudinal direction in an upper convection layer on the surface of a diaphragm main body. CONSTITUTION:A number of pipes 4 are arranged at a suitable interval L mutually in parallel so that they rectangularly intercross in a direction where natural wind 7 most dominate. When natural wind 7 occurs in the direction of an arrow, the surface of the upper convection layer 1 is agitated in waves but pipes 4 provided rectangularly to the natural wind 7 suppress the waves. The promotion of heat radiation due to stirring and increase in the heat radiation area which occur at the time of generating waves can be prevented. The water supply and drain port of each pipe 4 is provided adjacent to the surface of the diaphragm main body 3 in the form of a slit toward the longitudinal direction, and supply water is widened so that it slides along the surface of the diaphragm 3, and hence stirring due to supply water can be reduced. By draining the upper convection layer 1 from the supply and drain port 5, dusts and weeds on the surface of the diaphragm main body 3 can be removed and the light permeability can be restored.

Classifications:

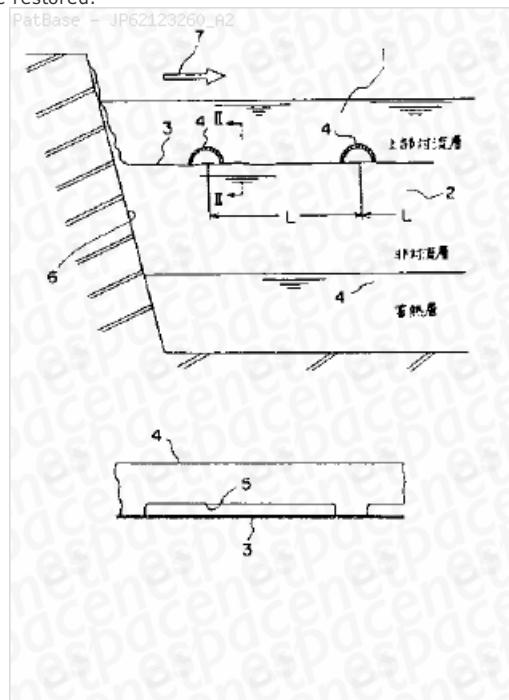
International (IPC 8-9): F24J2/00 F24J2/04 (Advanced/Invention);

F24J2/00 F24J2/04 (Core/Invention)

International (IPC 1-7): F24J2/00

CPC: F24S10/10 Y02E10/44

European: F24J2/04C Y02E10/44



Family:

Publication number	Publication date	Application number	Application date
JP62123260 A2	19870604	JP19850261974	19851121

Priority:

JP19850261974 19851121

Probable Assignee: TOSHIBA ENG AND CONSTR

Assignee(s): (std): TOSHIBA ENG AND CONSTR

Assignee(s): TOSHIBA ENG CONSTR CO LTD

Inventor(s): (std): SUGANO MITSUO

Title: CARNALLITE PREPARATION AND USES THEREOF IN EDIBLE APPLICATIONS

Abstract: The present invention relates to a Carnallite salt preparation useful in edible products, such as a food, beverage, dietary supplement, oral care, nutraceutical pet food, animal feed, pharmaceutical and other edible products. The Carnallite salt preparation of the invention is without high levels of sodium chloride and notably low in bromide. The Carnallite salt preparation may be a food grade product with dietary acceptable bromide levels. The present invention further relates to edible products comprising the Carnallite salt preparation, such as reduced sodium food products.

Classifications:

International (IPC 8-9): A21D10/00 A21D10/02 A21D13/00 A21D13/08 A21D2/02 A23B4/023 A23B7/005 A23B7/05 A23C15/00 A23C19/00 A23C19/08 A23C19/09 A23C9/00 A23C9/123 A23C9/152 A23F3/00 A23G3/34 A23G3/36 A23K1/175 A23K20/20 A23L1/03 A23L1/06 A23L1/10 A23L1/16 A23L1/164 A23L1/182 A23L1/212 A23L1/217 A23L1/223 A23L1/226 A23L1/237 A23L1/24 A23L1/304 A23L1/31 A23L1/314 A23L1/315 A23L1/317 A23L1/32 A23L1/325 A23L1/39 A23L13/40 A23L13/50 A23L13/60 A23L15/00 A23L17/00 A23L19/00 A23L19/18 A23L2/02 A23L2/04 A23L2/38 A23L2/52 A23L2/54 A23L2/66 A23L23/00 A23L27/40 A23L27/60 A23L29/00 A23L33/16 A61K47/02 A61K8/20 A61Q11/00 (Advanced/Invention); C01D3/06 C01F5/30 (Advanced/Non-invention)
CPC: A23G3/362 A23L2/04 A21D2/02 A23V2002/00 A23L2/02 A23B4/023 A23C19/0904 A23L13/432 A23L13/52 A23L13/65 A23L15/30 A23L17/00 A23L19/03 A23L19/18 A23L23/00 A23L27/40 A23L27/60 A21D13/42 A21D13/80 A21D13/40
US: 424/49 426/471 426/549 426/556 426/557 426/560 426/573 426/580 426/581 426/582 426/583 426/589 426/590 426/597 426/599 426/614 426/615 426/618 426/620 426/627 426/637 426/638 426/641 426/643 426/644 426/646 426/649 426/656 426/657 426/66 426/74 514/769

Family:

Publication number	Publication date	Application number	Application date
AU2012262284 AA	20121206	AU20120262284	20120531
BR112013030729 A2	20161206	BR20131130729	20120531
CA2837987 AA	20131202	CA20122837987	20120531
CA2837987 C	20160816	CA20122837987	20120531
DE602012012480 D1	20160107	DE201260012480T	20120531
EP2713759 A1	20140409	EP20120793260	20120531
EP2713759 A4	20141105	EP20120793260	20120531
EP2713759 B1	20151118	EP20120793260	20120531
ES2559655 T3	20160215	ES20120793260T	20120531
US2012308487 AA	20121206	US20120484914	20120531
US2015017285 AA	20150115	US20140497808	20140926
WO12166854 A1	20121206	WO2012US40100	20120531

Priority:

US20110493328P 20110603 EP20120793260 20120531 US20120484914 20120531
 WO2012US40100 20120531 US20140497808 20140926

Probable Assignee: ICL PERFORMANCE PRODUCTS LP

Assignee(s): (std): EFFENBERGER REINHARD ; HEIDOLPH BARBARA BUFE ; ICL PERFORMANCE PRODUCTS LP ; ZHOU LIRONG ; STOVER FREDERICK S ; STACHIW NANCY

Assignee(s): ICL SPECIALTY PRODUCTS INC ; ICL PERFORMANCE PRODUCTS LP ST LOUIS

Inventor(s): (std): ZHOU LIRONG ; STOVER FREDERICK S ; STACHIW NANCY ; HEIDOLPH BARBARA BUFE ; EFFENBERGER REINHARD ; STOVER FREDERICK

Inventor(s): STOVER FREDERICK S UNIV CITY ; ZHOU LIRONG ST LOUIS ; BARBARA BUFE HEIDOLPH ; FREDERICK STOVER ; HEIDOLPH BARBARA BUFE WENTZVILLE ; LIRONG ZHOU ; NANCY STACHIW ; REINHARD EFFENBERGER ; STACHIW NANCY FENTON

Agent(s): PIZZEYS PATENT AND TRADE MARK ATTORNEYS; PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; OSLER HOSKIN AND HARCOURT LLP; LAVOIX MUNICH; KLING SIMONE; CARPINTERO MARIO; KERCHER KEVIN M

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

Title: SYSTEM FOR USING GEOPRESSURED-GEOTHERMAL RESERVOIRS

Abstract: Process of drilling a bore into a geopressured-geothermal reservoir containing a gas-laden fluid, allowing the fluid to escape through the bore, passing the fluid into a rotatable turbine which causes a generator to produce electricity, passing the fluid to means for separating gas from the fluid, and passing the fluid into a multi-effect distillation system to extract fresh water from the fluid to produce fresh water and saturated brine.

Classifications:

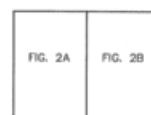
International (IPC 8-9): B01D1/26 E21B41/00 E21B43/00 E21B43/40 F03G4/00 F03G7/04 (Advanced/Invention)

International (IPC 1-7): F03G7/00

CPC: B01D1/26 E21B41/0057 E21B43/00 E21B43/40

European: B01D1/26 E21B41/00M2 E21B43/00 E21B43/40 F03G7/04 Y02E10/10

US: 60/641.2

FIG. 1
PRIOR ARTFIG. 2
PRIOR ART**Family:**

Publication number	Publication date	Application number	Application date
US5165235 A	19921124	US19900628839	19901212
USRE36282 E	19990831	US19940344228	19941123

Priority:

US19900628839 19901212 US19940344228 19941123

Probable Assignee:

NITSCHKE GEORGE S

Assignee(s): (std):

NITSCHKE GEORGE S

Inventor(s): (std):

NITSCHKE GEORGE S

68) Family number: 4549560 (US5009786A)

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Title: SELENATE REMOVAL FROM WASTE WATER

Abstract: A method and apparatus for removing selenate from waste water through the use of selenate respiring microorganisms under substantially anoxic conditions is described. The method includes a first zone for removing nitrate by assimilation into biomass. The first zone is maintained under aerobic conditions and is separated from a second zone where selenate is respired to elemental selenium by selenate respiring microorganisms under anoxic conditions. Biomass produced in the first zone may be processed to provide nutrients and electron acceptors for the maintenance of selenate respiring microorganisms when selenate becomes growth limiting. An optional sulfate reduction zone is provided in the method and apparatus where hydrogen sulfide is produced. The hydrogen sulfide so produced is circulated to the second zone and may be used to reduce residual selenite to elemental selenium.

Classifications:

International (IPC 8-9): C01B19/02 C02F3/28 C02F3/30 C02F3/32

C02F3/34 (Advanced/Invention);

C01B19/00 C02F3/28 C02F3/30 C02F3/32 C02F3/34 (Core/Invention)

International (IPC 1-7): C02F3/30 C02F3/34

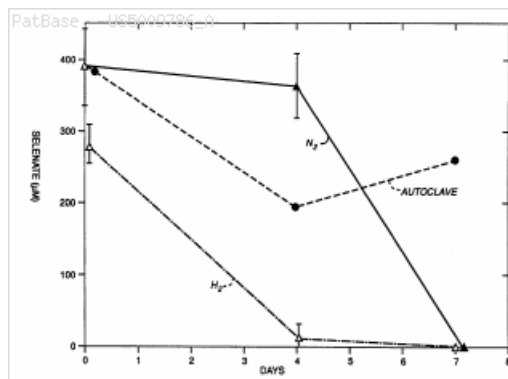
CPC: Y10S210/903 Y10S210/912 C02F3/30 Y02W10/37 C02F3/345

C01B19/02 C01P2006/60 C02F3/28 C02F3/2806 C02F3/302 C02F3/32

European: C01B19/02 C02F3/28 C02F3/28C C02F3/30 C02F3/30D

C02F3/32 C02F3/34E M01P6/60

US: 210/170 210/170.08 210/201 210/252 210/602 210/610 210/630 210/903 210/912

**Family:**

Publication number	Publication date	Application number	Application date
US5009786 A	19910423	US19890428699	19891030
US5271831 A	19931221	US19900628873	19901214

Priority:

US19890428699 19891030 US19900628873 19901214

Probable Assignee: US ARMY**Assignee(s):** (std): US INTERIOR ; US ARMY**Assignee(s):** SECRETARY OF INTERIOR AS US GOV ; THE UNITED STATES OF AMERICA AS REPRESENTED BY THE SECRETARY OF THE INTERIOR**Inventor(s):** (std): OREMLAND RONALD S**69) Family number: 5527580 (US3640850A)**

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Title: MULTISTAGE VAPOR-LIQUID CONTACT PROCESS FOR PRODUCING FRESH WATER FROM SALT WATER

Abstract: The invention is an improvement in distillation process for producing fresh water from salt water. The primary heat exchange is obtained by vaporizing a water immiscible fluid (such as a hydrocarbon) which boils at a temperature lower than water which is then recondensed by direct contact. Substantial simplification of plant, maintenance, etc. results. The invention is applicable generally to aqueous solutions of nonvolatile solutes, and to nonaqueous solutions of nonvolatile solutes.

Classifications:

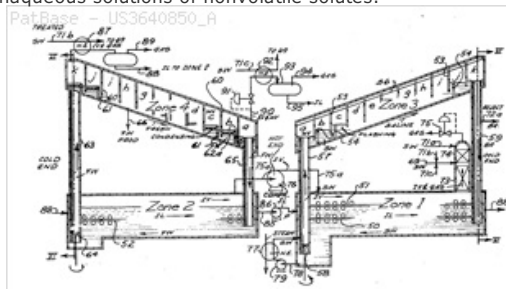
International (IPC 8-9): B01D1/26 B01D3/00 B01D3/06 B01D3/10 B01D3/12 C02F1/10 F01K25/10 F03G7/05 F25B1/00 G01N21/78 G01N31/02 G01N31/22 (Advanced/Invention); B01D1/26 B01D3/00 B01D3/10 B01D3/12 C02F1/10 F01K25/00 F03G7/00 F25B1/00 G01N21/77 G01N31/02 G01N31/22 (Core/Invention)

International (IPC 1-7): B01D1/00 B01D1/26 B01D3/00 B01D3/02 B01D3/06 B01D3/10 B01D3/12 B01D3/34 C02B1/04 C02B1/06 F01K25/08 F01K25/10 F03G7/04 F25B29/00 F25B9/00 G01N21/28 G01N21/78

CPC: Y10S159/17 Y10S159/33 Y10S203/11 Y10S159/903 Y10S203/21 B01D3/065 Y02W10/37 B01D1/26 C02F1/10 Y02E10/34 Y10T436/16 G01N31/22 G01N31/02 G01N21/783 Y02A20/128

European: B01D1/26 B01D3/06B C02F1/10 G01N21/78B G01N31/02 G01N31/22 Y02E10/34

US: 159/18 159/2.3 159/25.1 159/2MS 159/903 159/DIG.17 159/DIG.33 202/173 202/185.2 202/185A 202/234 203/1.1 203/100 203/11 203/22 203/23 203/24 203/39 203/42 203/73 203/74 203/91 203/DIG.20 23/23.0R 436/103 436/164

**Family:**

Publication number	Publication date	Application number	Application date
AU197351807 A1	19740808	AU19730051807	19730205
GB1508203 A	19780419	GB19750025872	19750618
GB1558776 A	19800109	GB19760049436	19761126
IL36385 A0	19710526	IL19710036385	19710310
IL36385 A1	19730730	IL19710036385	19710310
IL41316 A0	19730330	IL19730041316	19730117
IL41316 A1	19780131	IL19730041316	19730117
JP51049348 A2	19760428	JP19750074994	19750619
JP52087548 A2	19770721	JP19760143525	19761201
JP58037458 A2	19830304	JP19820057951	19820407
US3640850 A	19720208	US19700019592	19700316
US3796543 A	19740312	US19720224016	19720207
US3856631 A	19741224	US19720224018	19720207
US3986938 A	19761019	US19740480963	19740619
US4009082 A	19770222	US19750636417	19751201

Priority:

US19700019592 19700316 US19720224016 19720207 US19720224018 19720207
US19740480963 19740619 US19740480963 19740619 US19750636417 19751201
US19750638417 19751201

Probable Assignee: THOMAS N FINICAL JR

Assignee(s): (std): ADMINISTRATOR ENVIRONMENTAL PR ; CALIF AND OCCIDENTAL RESEARCH ; FINICAL T ; HARRISON W SIGWORTH ; SMITH JR C S ; SMITH JR CALVIN S ; SMITH JR CALVIN SCHWARTZ ; KARUBIN SHUWARUTSU SUMISU JUNI ; KARUBIN SHIYUWARUTSU SUMISU JI ; SIGWORTH H ; SMITH C ; SMITH C S ; SCHWARTZ SMITH C ; CALVIN S SMITH JR ; HARISUN W SHIGUWAASU ; THOMAS N FINICAL JR ; TOMASU ENU FUINIKARU JIYUNIA

Assignee(s): THOMAS NELSON FINICAL JR ; FINICAL T US ; OCCIDENTAL RESEARCH CORP ; HARRISON WILLIAM SIGWORTH ; SMITH JR CS ; KARUBIN SHUWARUTSU SUMISU JUNIA ; KARUBIN SHIYUWARUTSU SUMISU JIYUNIA ; SIGWORTH H US ; HARISUN DABURIYU SHIGUWAASU ; CALVIN SCHWARTZ SMITH ; EL CERRITO JR ; CALVIN SCHWARTZ SMITH JR ; CALIF AND OCCIDENTAL RESEARCH CORP ; ADMINISTRATOR ENVIRONMENTAL PROTECTION AGENCY US

Inventor(s): (std): KAMPHAKE L ; KARUBIN SHUWARUTSU SUMISU JUNI ; SMITH JR CALVIN SCHWARTZ ; SMITH JR CALVIN S ; SMITH CALVIN SCHWARTZ JR ; SMITH C ; KARUBIN SHIYUWARUTSU SUMISU JI ; SMITH CALVIN S JR

Inventor(s): SMITH C US ; CALVIN S SMITH JR ; CALVIN SCHWARTZ SMITH JR ; KARUBIN SHIYUWARUTSU SUMISU JIYUNIA ; KARUBIN SHUWARUTSU SUMISU JUNIA ; KAMPHAKE L US

Agent(s): REINHOLD COHN AND PARTNERS

70) Family number: 58505583 (US2015047805A)

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Title: HEAT TRANSFER THROUGH INTERIOR CLADDING OF LIVING SPACES

Abstract: The efficiency of radiant space heating or cooling is improved and the use of renewable energy sources enabled by reducing the resistance of the thermal path through cladding used in the floor, walls or ceiling of a domestic or commercial living space. The resistance of the thermal path is reduced by constructing the cladding with an array of thermal bridges each comprising a thermal shunt connected to a heat-collecting layer and to a heat-dispersing layer. Such bridged cladding extends the range of choice of interior cladding and of configuration of radiant system.

Classifications:

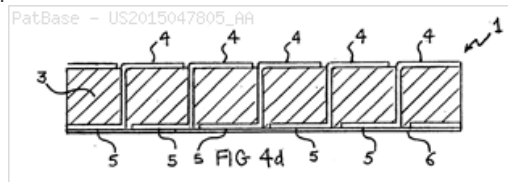
International (IPC 8-9): E04B1/80 E04F13/14 E04F13/16 E04F15/04

E04F15/10 F24D3/14 H01B17/56 (Advanced/Invention)

CPC: F24D3/14 E04F13/148 E04F13/16 E04F15/041 E04F15/107

F24D3/148 Y02B30/24

US: 165/53



Family:

Publication number	Publication date	Application number	Application date
US2015047805 AA	20150219	US20130969547	20130817
US10060635 BB	20180828	US20130969547	20130817

Priority:

US20130969547 20130817

Probable Assignee:

GREGORY BRUCE

Assignee(s): (std):

GREGORY BRUCE

Inventor(s): (std):

GREGORY BRUCE

71) Family number: 51110590 (WO12064477A2)

© PatBase

Title: COMPOSITIONS COMPRISING CIS-1,1,1,4,4,4-HEXAFLUORO-2-BUTENE AND 2-DIFLUOROMETHOXY-1,1,1,2-TETRAFLUOROETHANE AND USES THEREOF

Abstract: A composition comprising cis-1,1,1,4,4,4-hexafluoro-2-butene (cis-HFO-1336mzz) and 2-difluoromethoxy-1,1,1,2-tetrafluoroethane (HFE-236eaEbg) is provided. Such compositions may be azeotropic or azeotrope-like. Also, methods are provided for producing cooling and for replacing HCFC-123, CFC-11, or CFC-113 in a chiller. Also, processes for recovering heat, for generating power, and for replacing HFC-245fa in power cycles are provided.

Classifications:

International (IPC 8-9): C07C21/18 C07C43/12 C09K5/04 F01D15/00

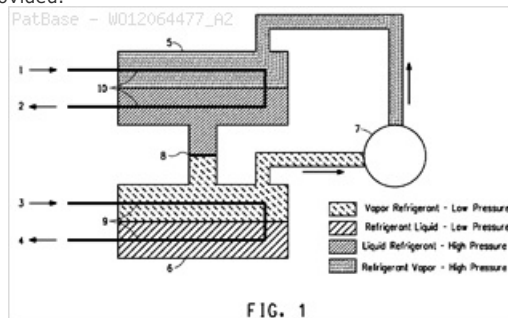
F01K25/08 F01K7/32 F01K9/00 (Advanced/Invention)

CPC: C09K5/045 C09K2205/112 C09K2205/126 C09K2205/22

F01D15/005 F01K25/10

European: C09K5/04B4B F01D15/00B F01K25/10 M09K205/112

M09K205/126 M09K205/220



Family:

Publication number	Publication date	Application number	Application date
TW201219349 A	20120516	TW20110139287	20111028
WO12064477 A2	20120518	WO2011US56894	20111019
WO12064477 A3	20120726	WO2011US56894	20111019

Priority:

US20100394827P 20101110

Probable Assignee: DU PONT

Assignee(s): (std): DU PONT ; DUPONT CO LTD ; KONTOMARIS KONSTANTINOS ; MINOR BARBARA HAVILAND

Assignee(s): E I DU PONT DE NEMOURS AND CO ; E I DU PONT DE NEMOURS AND COMPANY

Inventor(s): (std): KONTOMARIS KONSTANTINOS ; MINOR BARBARA HAVILAND

Agent(s): TUCKER N LYNN

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

72) Family number: 44320608 (WO10012028A1)

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Title: COVERED POND-TYPE PHOTOBIOREACTOR FOR LARGE-SCALE, INTENSIVE CULTIVATION OF MICROALGAE

Abstract: A system for the large-scale, intensive cultivation of algae employing pondage containers in the form of wide, flat, transparent or translucent polymer film tubes. Said pondage tubes are laid in long, parallel runs upon a graded, flat, level surface and large flows of shallow water are continuously circulated through them by paddle wheel-type circulators in closed housings.

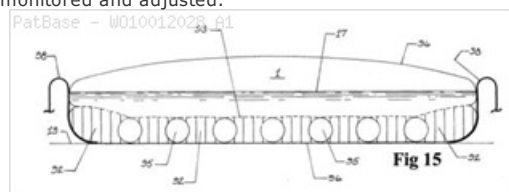
Said pondage tubes have an upper chamber used for biological activity and a lower chamber employed as a water delivery conduit or storage vessel during periods of darkness, water being transferred as required from the lower to the upper chamber at a controlled rate. The upper film surfaces are maintained clear of the water surface by gas pressure and entry of solar irradiance is optionally modulated. Large pondages are sub-divided into smaller units, each with its own water circulation and management means and the aquatic environment within said pondages is continuously monitored and adjusted.

Classifications:

International (IPC 8-9): A01G33/00 A01H13/00 B01J19/00 C12M1/00 (Advanced/Invention)

CPC: C12M21/02 C12M23/06 C12M23/18 C12M23/26 C12M23/34 C12M27/02 C12M29/04 C12M31/08

European: C12M21/02 C12M23/06 C12M23/18 C12M23/26 C12M23/34 C12M27/02 C12M29/04 C12M31/08



Family:

Publication number	Publication date	Application number	Application date
AU2009276284 AA	20100204	AU20090276284	20090728
WO10012028 A1	20100204	WO2009AU00959	20090728

Priority:

AU20080903864 20080729 AU20090276284 20090728 WO2009AU00959 20090728

Probable Assignee: BIOSEQ PTY LTD

Assignee(s): (std): BIOSEQ PTY LTD ; VOWLES ROBERT W

Inventor(s): (std): VOWLES ROBERT W

Inventor(s): ROBERT W VOWLES

Agent(s): BIOSEQ PTY LTD

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

73) Family number: 42102613 (US2008193828A)

© PatBase

Title: APPARATUS AND METHODS OF DETERMINATION OF STATE OF CHARGE IN A REDOX FLOW BATTERY

Abstract: Apparatus and methods for determining the individual states of charge of electrolytes in a redox battery with mixed or unmixed reactants by optical absorption spectrophotometry are disclosed. The state of charge thus obtained may serve as a gauge for the amount of electro-chemical energy left in the system. Further, the information on anolyte and catholyte charge states may be used for any rebalancing mechanism if the states are different.

Classifications:

International (IPC 8-9): B23H3/02 B60L11/18 G01N21/05 G01N21/80 H01M10/42 H01M10/48 H01M2/38 H01M6/42 H01M6/48 H01M8/04

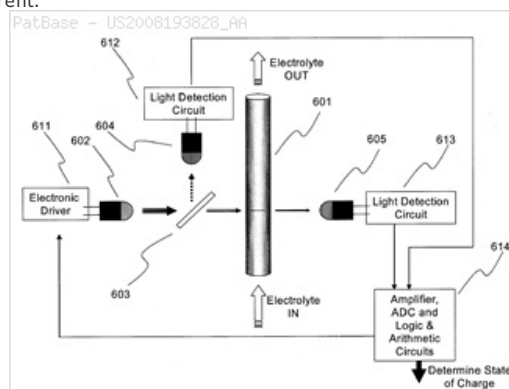
H01M8/18 H02J7/00 (Advanced/Invention); H01M10/42 H01M2/00 H01M6/42 (Core/Invention)

International (IPC 1-7): H01M6/42

CPC: Y02T10/7005 Y02T10/705 Y02T10/7072 Y02T90/124 Y02T90/14 G01N21/05 G01N21/80 H01M8/04186 H01M10/42 Y02E60/528 B60L50/64 B60L53/80 H01M8/188

European: B60L11/18L6 B60L11/18M38 G01N21/80 H01M8/04C4 H01M8/20 S01N21/05 T01M10/42 Y02E60/52J

US: 204/228.6 320/134 320/137 324/432 429/51 429/61 429/61S 429/63 429/63P 429/90 429/91 429/91S



Family:

Publication number	Publication date	Application number	Application date
CN101657922 A	20100224	CN200880004746	20080211
CN101657922 B	20120829	CN200880004746	20080211
EP2122727 A1	20091125	EP20080729546	20080211
EP2122727 A4	20140319	EP20080729546	20080211
IN02667CH2007 A	20160831	IN2007CH02667	20071116
IN04643CN2009 A	20091002	IN2009CN04643	20090807
US2008193828 AA	20080814	US20070674101	20070212
US7855005 BB	20101221	US20070674101	20070212
WO08100862 A1	20080821	WO2008US53601	20080211

Priority:

US20070674101 20070212 WO2008US53601 20080211

Probable Assignee: IMERGY POWER SYSTEMS INC

Assignee(s): (std): DEEYA ENERGY INC ; DEEYA ENERGY INC US ; DEEYA ENERGY TECHNOLOGIES INC ; SAHU SAROJ KUMAR

Assignee(s): TRIPLEPOINT CAPITAL LLC (AS GRANTEE) ; SILICON VALLEY BANK ; TRIPLEPOINT CAPITAL LLC AS GRANTEE ; SILLICON VALLEY BANK ; IMERGY POWER SYSTEMS INC ; IMERGY POWER SYSTEMS INC WAS KNOWN AS DEEYA ENERGY INC..

Inventor(s): (std): SAHU SAROJ KUMAR ; KUMAR SAHU SAROJ
Inventor(s): SAHU SAROJ
Agent(s): FREEMAN JACQUELINE CAROL; WILSON SONSINI GOODRICH AND ROSATI; HAYNES AND BOONE LLP; EDWARDS GARY J
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

74) Family number: 6736620 (US4077158A)

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Title: AGRICULTURAL GREENHOUSING RECONCILING INTENSIFIED URBAN METHODS

Abstract: Upon the premises that greater and better food production is vital, this invention (herein abbreviated as AGRIMUM) discloses an architecturally and aesthetically acceptable urban domicile, methodology and intensification of continuous food production in the urban or suburban environment with energy and resource conservation, automation and mass production techniques and apparatus included.

Classifications:

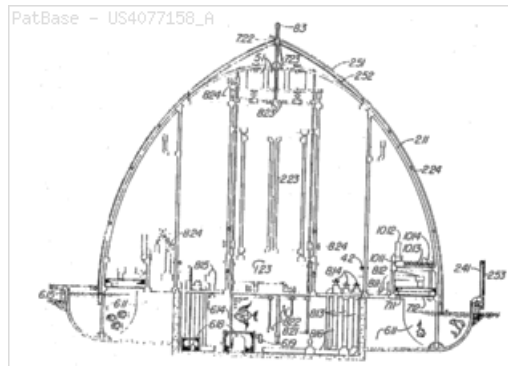
International (IPC 8-9): A01G31/02 (Advanced/Invention); A01G31/02 (Core/Invention)

International (IPC 1-7): A01G9/00

CPC: A01G31/02 Y02P60/216

European: A01G31/02

US: 119/200 119/226 47/1.1 47/17 47/59 47/59R 52/86



Family:

Publication number	Publication date	Application number	Application date
US4077158 A	19780307	US19760689627	19760524

Priority:

US19760689627 19760524

Probable Assignee:

ENGLAND WILL CLARKE

Assignee(s): (std):

ENGLAND WILL CLARKE

Inventor(s): (std):

ENGLAND WILL CLARKE

75) Family number: 47009633 (AR045781A)

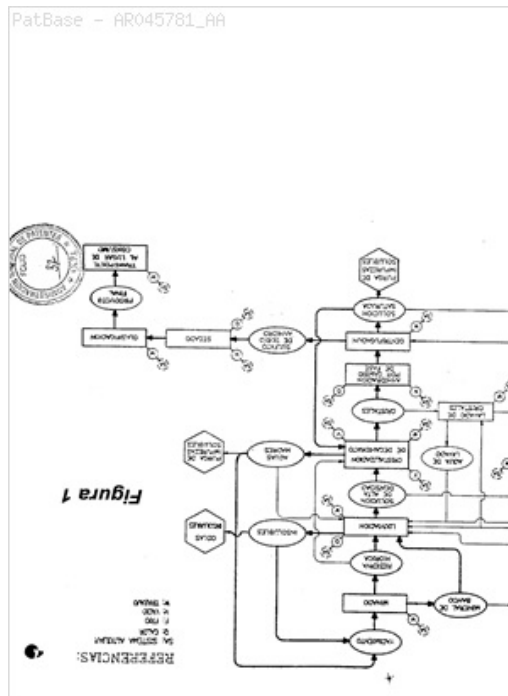
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Title: PROCEDIMIENTO PARA PURIFICAR Y PARA ANHIDRAR UNA SAL INORGANICA HIDRATADA PROVENIENTE DE MINERALES Y EVENTUALMENTE SALMUERAS QUE LA CONTIENEN PARTICULARMENTE DE APLICACION PARA EL SULFATO DE SODIO, EMPLEANDO FUENTES DE ENERGIA NO CONVENCIONALES; Y UNIDADES DE PROCESO EMPLEADAS COMO POZA SOLAR DE GRA PROCEDURE TO POSSIBLY PURIFY AND FOR ANHIDRAR AN ORIGINATING INORGANIC MINERAL SALT HYDRATED AND BRINES THAT CONTAIN IT PARTICULARLY OF APPLICATION FOR SODIUM SULPHATE, USING NONCONVENTIONAL POWER PLANTS; AND USED UNITS OF PROCESS LIKE SOLAR POZA OF GRA (Machine translation)

Abstract: Source: AR045781A [ES] Procedimiento para purificar sales inorganicas solubles en agua provenientes de minerales o salmueras, aplicable especialmente para sulfato de sodio, comprendiendo: i) lixiviacion y decantacion del mineral en pozas solares de gradiente salino no conectivo; ii) cristalización de la sal hidratada que, para el caso del sulfato de sodio, es sulfato de sodio decahidratado, en cristalizadores naturales; iii) anhidracion por cambio de fase de los cristales hidratados de la sal mediante el uso alternativo de energia solar (a) o geotermica (b); y (iv) centrifugacion, secado, clasificacion y embolsado del producto final. La lixiviacion de un mineral que comprende una sustancia inorganica basica puede ser acida. La conversion de la sal hidratada a anhidra por cambio de fase de los cristales hidratados puede realizarse con energia geotermica. La lixiviacion puede comprender incorporar a dicha poza solar una salmuera proveniente de una reserva hidrica. Optativamente, se emplea energia eolica para bombear las soluciones, o mediante conversion previa a energia electrica para asistir la demanda de energia mecanica e iluminacion. El procedimiento puede aplicarse a sales inorganicas que tengan curvas de solubilidad crecientes con la temperatura, a temperaturas inferiores a las que se desarrolla la lixiviacion o de reaccion. Poza solar de gradiente salino no conectivo, que puede emplearse tambien como poza solar calefactora, consistente en una cuba excavada y/o emparvada perimetralmente, con piso impermeabilizado y rompeolas. Cristalizador natural consistente en una cuba excavada y/o emparvada perimetralmente, con piso impermeabilizado y cubierta con malla media sombra.

Machine translation: Procedure to specially purify soluble inorganic water salts originating of minerals or brines, applicable for sodium sulphate, being included/understood: i) leaching and solar movement of the mineral in pozas of nonconectivo saline gradient; II) crystallization of the hydrated salt that, for the case of sodium sulphate, is decahidratado sodium sulphate, in natural crystallizers; III) anhidracion by change of phase of hydrated crystals of the salt by means of the alternative use of geothermal solar energy (a) or (b); and (IV) centrifugalization, drying, pocketed classification and of the end item. The leaching of a mineral that includes/understands basic an inorganic substance can be acid. The conversion of the salt hydrated to anhydrous by change of phase of hydrated crystals can be made with geothermal energy. The leaching can include/understand to incorporate to this poza to pave an originating brine of a hydric reserve. Optatively, Aeolian energy is used to pump the solutions, or by means of previous conversion to electrical energy to attend the demand of mechanical energy and illumination. The procedure can be

International (IPC 1-7): C01D5/16 C01D5/18 C22B3/20 E21B41/28



Publication number	Publication date	Application number	Application date
AR045781 AA	20051116	AR2003P103534	20030929
AR079094 AB	20111228	AR2010P102590	20100715

BO20020002202 20020926

Probable Assignee: GALLI DANIEL ERNESTO

Assignee(s): (std): GALLI DANIEL ERNESTO ; QUIROGA RAMIREZ LUIS FERNANDO

Inventor(s): (std): GALLI DANIEL ERNESTO ; QUIROGA RAMIREZ LUIS FERNANDO

Title: TREATMENT PLANT FOR PROCESSING ANIMAL WASTES PRODUCED IN A CONFINED ANIMAL GROWING ARE

Abstract: Noxious odors and water pollution commonly associated with the raising of hogs, cattle or poultry under confined conditions are eliminated by replacing the conventional waste lagoon and waste spreading fields with a wastewater treatment plant. The treatment plant extracts manure from the wastewater, then dries and burns the manure along with collected waste gases. The liquid waste portion is filtered, deodorized and then recirculated to the growing buildings as flushwater.

International (IPC 8-9): A01K1/01 C02F1/04 C02F1/14 C02F1/16 C02F1/78 C02F11/06 C02F11/12 (Advanced/Invention); C02F1/04 C02F1/14 C02F1/16 C02F11/06 C02F11/12 (Advanced/Non-invention);

A01K1/01 C02F1/14 C02F1/16 C02F1/78 C02F11/06

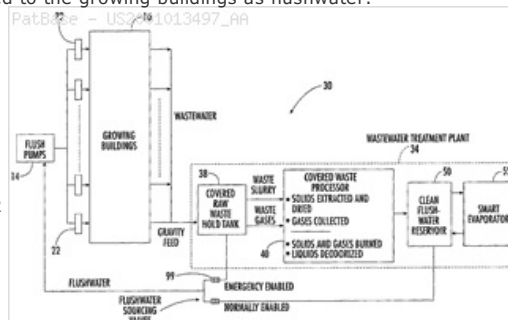
C02F11/12 (Core/Invention);

C02F1/04 (Core/Non-invention)

International (IPC 1-7): A01K1/01 A01K1/02 B01D1/00 B01D37/00
C02F1/04 C02F1/14 C02F1/16 C02F1/72 C02F1/78 C02F11/06 C02F11/12
CPC: Y02W10/37 Y02W10/40 A01K1/0103 C02F1/04 C02F1/78
C02F2103/20

European: A01K1/01A C02F1/78 M02F1/04 M02F103/20

US: 119/447 119/450 210/17 210/170.08 210/170.080S 210/744 210/747
210/747.9 210/747.900P 210/767 210/767S 210/769 210/805



Publication number	Publication date	Application number	Application date
AU199945794 A1	20000110	AU19990045794	19990622
AU199945794 A5	20000110	AU19990045794	19990622
BRPI9912211 A	20010410	BR1999PI12211	19990622
CN1313835 A	20010919	CN19998009985	19990622
EP1117617 A1	20010725	EP19990928810	19990622
JP2002518034 T2	20020625	JP2000055833T	19990622

US2001013497 AA	20010816	US20010788223	20010216
US6190566 BA	20010220	US19980103305	19980623
WO9967174 A1	19991229	WO1999US13926	19990622
WO9967174 C2	20000406	WO1999US13926	19990622

Priority:

US19980103305 19980623 WO1999US13926 19990622 US20010788223 20010216

Probable Assignee: STEVEN N KOLBER

Assignee(s): (std): KOLBER STEVEN N ; STEVEN N KOLBER

Inventor(s): (std): KOLBER SN ; KOLBER STEVEN N

Inventor(s): SN KOLBER ; STEVEN N KOLBER

Designated states: AE AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE DK EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG US UZ VN YU ZA ZW

77) Family number: 56489638 (US2014174080A)

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Title: HYBRID TRIGENERATION SYSTEM BASED MICROGRID COMBINED COOLING, HEAT AND POWER PROVIDING HEATING, COOLING, ELECTRICAL GENERATION AND ENERGY STORAGE USING AN INTEGRATED AUTOMATION SYSTEM FOR MONITOR, ANALYSIS AND CONTROL

Abstract: Provided is a consumer to industrial scale energy trigeneration process based microgrid combined cooling, heat and power. The present invention includes conversion, processing, extraction and/or storage systems for electrical, chemical and thermal energy. The invention provides a quintessential renewable energy ecosystem incorporating vital energy generation, thermal heating and cooling processes with integrated components installed to encompass a distributed renewable energy generation, energy storage and integrated automation system. The automation system of the invention provides the ability to view, monitor, analyze, control and interact with system components.

Classifications:

International (IPC 8-9): A01G31/02 A01G7/04 B29C45/17 C04B7/36 C10B53/00 C10B57/00 C10B57/10 C12M1/00 C12M1/34 C12M1/36 C12P7/06 C12P7/10 C21C5/52 C21D1/32 C22C33/08 C25C3/06 D01F9/12 D01F9/32 F01K F01K13/00 F01K13/02 F01K23/10 F01K25/00 F01K25/10 F01K27/02 F01K3/00 F01K3/02 F01K3/12 F02C F02C1/05 F02G1/043 F02G1/044 F02G1/053 F02G1/055 F02G1/057 F02G5/02 F03D7/04 F03D9/18 F03G F03G4/00 F03G6/00 F03G6/06 F03G7/00 F03G7/04 F03G7/10 F22B F22B1/00 F24J2/00 F24J2/07 F24J2/12 F24J2/14 F24J2/18 F24J2/52 F24J2/54 F24J3/00 F25B15/00 F25B27/00 F25B27/02 F25B9/14 F28D F28D20/00 H01M8/00 H01M8/04 H01M8/0662 H02J3/28 H02J3/38 H02K H02K7/18 H02S10/10 H02S40/22 H05B37/02 (Advanced/Invention);

F02G1/043 F24J2/46 (Advanced/Non-invention);
F01K F02C F03G F22B F28D H02K (Subclass/Invention)

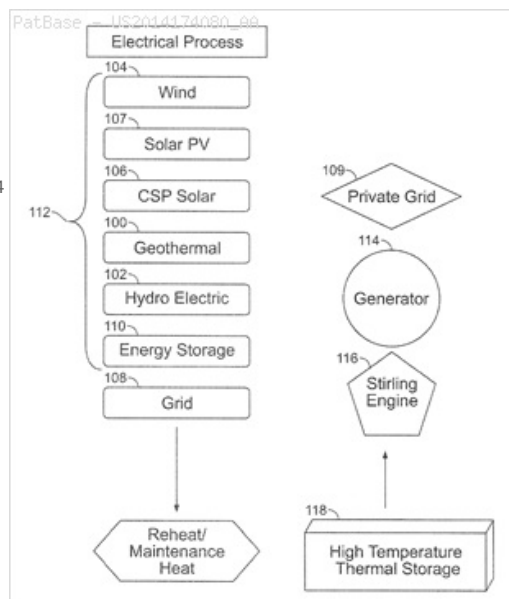
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US: 126/694 220/592.2 315/297 47/58.1LS 47/62R 60/516 60/517 60/641.1 60/698 62/331

Family:

Publication number	Publication date	Application number	Application date
AU2015203118 AA	20150709	AU20150203118	20150611
AU2017204250 AA	20170713	AU20170204250	20170622
BR102015013592 A2	20181030	BR20151013592	20150610
BR112015011248 A2	20171219	BR20151111248	20131115
CA2891435 AA	20151211	CA20152891435	20150514
CA2930794 AA	20160513	CA20132930794	20131115
CA2973565 AA	20170711	CA20142973565	20140501
CN104919144 A	20150916	CN201380070520	20131115
CN105257425 A	20160120	CN201510589238	20150611
EP2920432 A2	20150923	EP20130799442	20131115
EP2955372 A2	20151216	EP20150275151	20150610
EP2955372 A3	20160629	EP20150275151	20150610
HK1218148 A1	20170203	HK20160106103	20160530
JP2016000995 A2	20160107	JP20150116207	20150609
JP2016503477 A2	20160204	JP20150542822	20131115
JP2016503477 T2	20160204	JP20150542822T	20131115
US2014174080 AA	20140626	US20130081271	20131115
US2015143806 AA	20150528	US20150613994	20150204
US2015196002 AA	20150716	US20140267580	20140501
US2017204806 AA	20170720	US20170475995	20170331



US2018347406 AA	20181206	US20180102158	20180813
US9624913 BB	20170418	US20130081271	20131115
US10060296 BB	20180828	US20150613994	20150204
WO14078659 A2	20140522	WO2013US70313	20131115
WO14078659 A3	20150702	WO2013US70313	20131115
WO15105523 A1	20150716	WO2014US36410	20140501

Priority:

US20120727108P 20121115	US20130859377P 20130729	US20130877467P 20130913
US20130886213P 20131003	US20130896039P 20131026	US20130081271 20131115
WO2013US70313 20131115	US20140926372P 20140112	US20140954178P 20140317
US20140972365P 20140330	US20140267580 20140501	WO2014US36410 20140501
US20140010784P 20140611	US20150613994 20150204	AU20150203118 20150611
US20170475995 20170331	AU20170204250 20170622	US20180102158 20180813

Probable Assignee: FRIESTH KEVIN LEE

Assignee(s): (std): FRIESTH KEVIN ; FRIESTH KEVIN LEE ; KEVIN LEE FRIESTH

Inventor(s): (std): FRIESTH KEVIN LEE ; FRIESTH KEVIN ; KEVIN LEE FRIESTH

Agent(s): SPRUSON AND FERGUSON; BORDEN LADNER GERVAIS LLP; POTTER CLARKSON LLP; WENPING AND CO; HIROE AND ASSOCIATES PATENT PROFESSIONAL CORP; BRIAN J; JESSICA L; BRICK GENTRY PC; LAURENZO BRIAN J; MIKKILINENI SRIKANT

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

78) Family number: 44003639 (US2009283242A)

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Title: THERMO-CHEMICAL HEAT PUMP AND METHODS OF GENERATING HEAT FROM A GAS STREAM

Abstract: A method of generating heat from a gas stream includes providing a first gas stream having a first temperature and a moisture content approximately saturating the gas stream, removing the moisture content from the first gas stream to form a second gas stream having a second temperature greater than the first temperature of the first gas stream, and heat exchanging the second gas stream having the second temperature greater than the first temperature of the first gas stream.

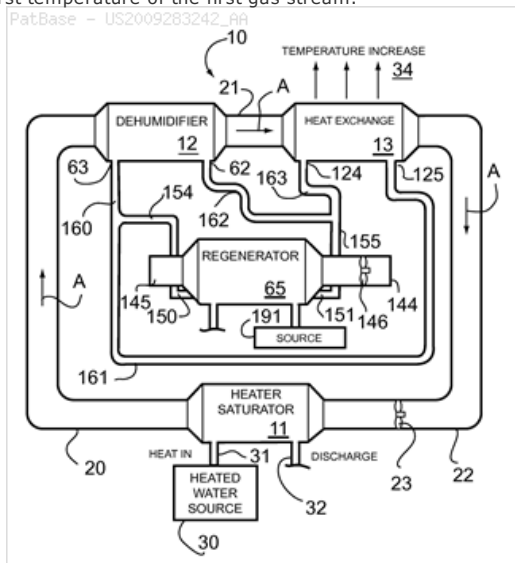
Classifications:

International (IPC 8-9): B01D53/06 B01D53/14 F24F3/14 F28B3/00 F28B9/10 (Advanced/Invention); F24F3/12 F28B3/00 F28B9/00 (Core/Invention)

CPC: F24F3/1423 F24F5/0007

European: F24F3/14C2 F24F5/00C

US: 165/60 165/60P 62/121 62/121S 95/113 95/114 95/117 95/194 95/209 95/227 95/231 95/92



Family:

Publication number	Publication date	Application number	Application date
US2009283242 AA	20091119	US20090467269	20090516
US8241399 BB	20120814	US20090467269	20090516
WO09140668 A1	20091119	WO2009US44273	20090516

Priority:

US20080127955P 20080516	US20090467269 20090516
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Probable Assignee: ALBERS WALTER

Assignee(s): (std): ALBERS WALTER

Inventor(s): (std): ALBERS WALTER

Agent(s): MICHAEL WINFIELD GOLTRY; PARSONS AND GOLTRY; MICHAEL W; ROBERT A; GOLTRY MICHAEL W

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

Title: BAROMETRIC DISTILLATION SYSTEM

Abstract: The invention relates to a system for purifying salty or brackish water which may, also, contain solids and living organisms making the water unpalatable for agriculture or long term animal consumption. The system includes a cyclic mechanism which causes an evaporable liquid to boil at a predetermined pressure and temperature in a first vertical elongated column, vapor cross over means to a second vertical elongated column, said vapor being condensed at a predetermined pressure and temperature in the second vertical elongated column, means for supplying heat to the first column, heat rejection means for the second column for reliquefying the material. Heat may be supplied to the first column by low temperature geothermal heat, heat from solar ponds, heat from solar collecting devices, as well as heat from the ambient air, or any form of low temperature heat for vaporizing the subject liquid. Heat supplied to first vertical column is always kept at a greater temperature than the second column, liquid cyclic means being provided by pump means forcing liquid in both vertical columns to the top of both vertical columns, means for venting noncondensables to the atmosphere, control means for deactivating pump means of first and second columns, gravity causes the liquid to fall in first and second vertical columns causing vaporization of the liquid in the first column and reliquefying in the second column accomplishing single stage distillation. Liquid seal means at the base of the first vertical column, liquid seal means at the base of the second vertical column. Another aspect of this invention takes advantage of cyclic relatively low pressure to degas the liquid from dangerous and hazardous dissolved gases of chlorine, arsenic, etc found in large quantities in water. Yet another aspect of the present invention is cellular destruction (DNA) of most living organisms present in the brackish water.

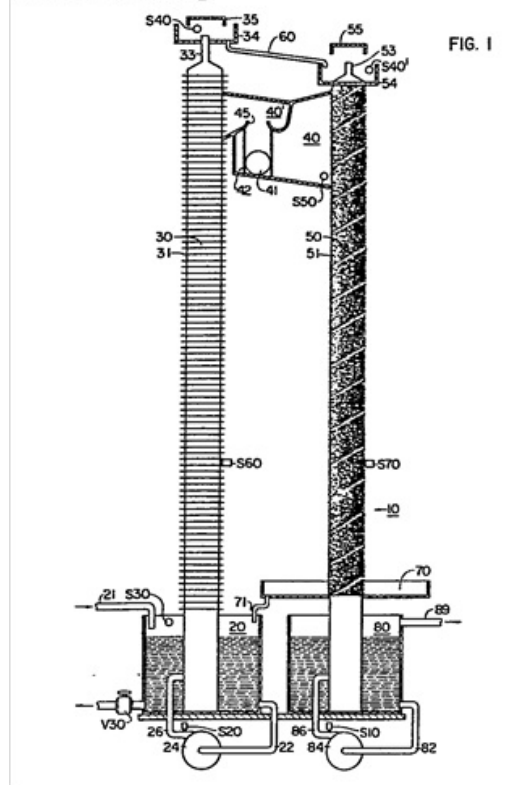
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C02F1/16 (Advanced/Invention);

B01D3/10 C02F1/00 C02F1/04 C02F1/16 (Core/Invention)

International (IPC 1-7): B01D3/10 B01D3/42 C02F1/00 C02F1/04 C02F1/14**CPC:** Y10S203/23 B01D3/103 C02F1/046 C02F1/16 Y02W10/37**European:** B01D3/10B C02F1/04M C02F1/16**US:** 202/205 203/11 203/91 203/99 203/DIG.22

PatBase - US4319965_A

**Family:**

Publication number	Publication date	Application number	Application date
AU198175454 A1	19820325	AU19810075454	19810917
AU547629 B2	19851031	AU19810075454	19810917
CA1159003 A1	19831220	CA19810386152	19810917
EP0048596 A1	19820331	EP19810304275	19810917
EP0048596 B1	19851218	EP19810304275	19810917
MX7227 U	19880118	MX19810101835U	19810917
US4319965 A	19820316	US19800188347	19800918

Priority:

US19800188347 19800918 CA19810386152 19810917 MX19810189201 19810917

Probable Assignee:

PARKER S A

Assignee(s): (std):

PARKER S A ; PARKER SIDNEY A

Assignee(s):

SIDNEY A PARKER ; PARKER SA

Inventor(s): (std):

PARKER SIDNEY A

Inventor(s):

SIDNEY A PARKER

Agent(s):

COLLISON AND CO; SMART AND BIGGAR

Designated states:

FR GB NL

Title: SYSTEM FOR CULTIVATION AND PROCESSING OF MICROORGANISMS, PROCESSING OF PRODUCTS THEREFROM, AND PROCESSING IN DRILLHOLE REACTORS

Abstract: Described are methods of cultivating autotrophic microorganisms, particularly microalgae or diatoms, in a bioreactor by entraining a culture of the microorganisms in a tenuous, gelled, thixotropic carrier medium having nutrients therefor and moving the medium along a passage at a sufficiently slow speed to enable laminar flow which in cross section is closed and which has transparent walls through which the culture is irradiated to enable photosynthesis. The method includes effecting convective turnover of the culture and medium as they flow along the passage by differentially heating the medium laterally relative to the flow direction so as to produce a generally helical flow of the culture and medium. Also described are processing methods, both physical and chemical, performed underground e.g. in drillholes, to utilise decavitation energy under ambient elevated pressures, including processes to implement lysis of the micro-organisms, producing methanol, syngas synthesis, Haber ammonia synthesis, Fischer-Tropsch reactions, supercritical reactions, dimethyl ether synthesis, and nitric acid synthesis.

Classifications:

International (IPC 8-9): C01C1/04 C07C1/04 C07C67/02 C11B13/00 C12M1/00 C12M1/113 C12N1/12 C12N13/00

E21B43/00 (Advanced/Invention);

C11B13/00 C11B7/00 (Advanced/Non-invention);

C12M1/00 C12M1/107 C12N1/12 E21B43/00 (Core/Invention)

CPC: C12M23/04 C12M23/06 C12M23/22 C12M27/00 C12M27/06

C12M29/24 C12M41/12 C12N1/12 C07C67/02 C01C1/04 C07C1/04

C12M21/02 C12M23/26 C12M29/06 C12M41/00 C12M41/18 C12M43/02

C12M43/08 E21B43/16

European: C12M21/02 C12M23/04 C12M23/06 C12M23/22 C12M23/26

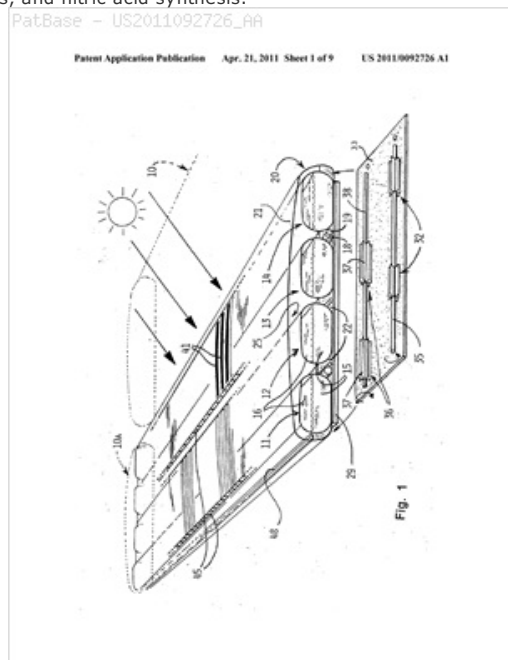
C12M27/00 C12M27/06 C12M29/06 C12M29/24 C12M41/00 C12M41/12

C12M41/18 C12M43/02 C12M43/08 E21B43/16

US: 423/359 435/173.7 435/173.8 435/173.800S 435/173.9 435/257.1

435/257.100S 518/700 554/124 554/169 554/174 554/175 554/175P

568/698 568/910



Family:

Publication number	Publication date	Application number	Application date
AU2011200090 AA	20110203	AU20110200090	20110112
AU2011200090 BB	20160107	AU20110200090	20110112
AU2016202159 AA	20160428	AU20160202159	20160406
US2011092726 AA	20110421	US20100928405	20101210
US2015072400 AA	20150312	US20140269354	20140505
US8715980 BB	20140506	US20100928405	20101210
WO09149519 A1	20091217	WO2009AU00750	20090612

Priority:

AU20080902944 20080612 WO2009AU00750 20090612 US20100928405 20101210
AU20110200090 20110112 US20140269354 20140505 AU20160202159 20160406

Probable Assignee: WINWICK BUSINESS SOLUTIONS PTY LTD

Assignee(s): (std): CLARKE WILLIAM SEVERN ; WINWICK BUSINESS SOLUTIONS PTY ; WINWICK BUSINESS SOLUTIONS PTY LTD

Inventor(s): (std): CLARKE WILLIAM SEVERN

Inventor(s): WILLIAM ATTORNEY CLARKE

Agent(s): PATENT ATTORNEY SERVICES; HENRY I; GRANT MICHAEL JOHN

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

81) Family number: 47896662 (AU2010201962A)

© PatBase

Title: SALT PURIFICATION PROCESS

Abstract: A process and apparatus for extracting commercially useful salts from saline ground water. The saline ground water is typically high in carbonates and bicarbonates and sodium ions and 5 low in calcium and magnesium ions. The saline ground water may, for instance, be mine waste water such as from a coal-seam gas mine. The process comprises the steps of filtering the waste water through an ultra-filtration device to remove insoluble solids, treating the filtered saline ground water through an ion exchange resin to reduce the magnesium and calcium ions in the water, passing the treated water through a reverse osmosis apparatus to 10 produce a pre-concentrate and a permeate, the permeate comprising substantially potable water and the pre-concentrate comprising a selected concentration of salts including the carbonates and bicarbonates, passing the pre-concentrate into an evaporation pan and carrying out fractional crystallization therein to separate out commercially useful carbonates and bicarbonates and to produce an overflow of substantially sodium chloride; and at least a 15 proportion of the sodium chloride being used to regenerate the ion exchange resin. C~j 0 cocc z: z C' LIO co T- CD 14 crU) (N 04 . ++ + + +0 Cf (z. '- u 0 ZUU

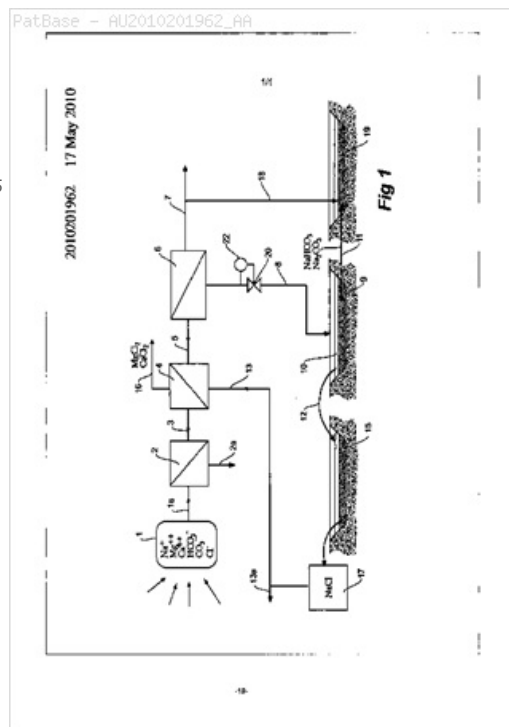
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Classifications:

International (IPC 8-9): C02F1/14 C02F1/42 C02F1/44 C02F9/00
E03B3/06 E21C41/32 (Advanced/Invention)

CPC: Y02W10/37 C02F9/00 B01D1/24 C02F1/04 C02F1/14 C02F1/441
C02F1/444 C02F2001/425 C02F2103/06 C02F2103/08 C02F2103/10
C02F2209/05 C02F2301/08 C02F2303/16 Y02A20/128 Y02A20/129
Y02A20/131 Y02A20/142

European: B01D1/24 C02F9/00 M02F1/04 M02F1/14 M02F1/42D
M02F1/44B M02F1/44D M02F103/06 M02F103/08 M02F103/10 M02F209/05
M02F301/08 M02F303/16



Family:

Publication number	Publication date	Application number	Application date
AU2010201962 AA	20101209	AU20100201962	20100517

Priority:

AU20090902254 20090519 AU20100201962 20100517

Probable Assignee: OSMOFLO PTY LTD

Assignee(s): (std): OSMOFLO PTY LTD

Inventor(s): (std): FABIG MARCUS JOHN

Inventor(s): MARCUS JOHN FABIG

Agent(s): MADDERNS PATENT AND TRADE MARK ATTORNEYS; MADDERNS PTY LTD

82) Family number: 9097675 (JP63058061A)

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Title: METHOD FOR REPAIRING SOLAR POND

Abstract: PURPOSE:To reduce incurring of a heat energy loss and to reduce a time and a man hour required between preparation of a repair work and restoration after completion of repair, by a method wherein hot water in the heat accumulating layer of a pond needing repair is transferred to other sound pond, and simultaneously, water in the fresh water layer and the non-convection layer of a sound pond is transferred to the pond needing repair. CONSTITUTION:A hot water return valve 14a of a pond A is brought into a closed state from an opening state, a solute recovery valve 15a is brought into an opening state from a closed state, and an outlet 8a is lifted to a position above a water surface. Hot water of a heat accumulating material 11a of the pond A is poured through an outlet 8b of a pond B to a heat accumulating material 1b of the pond B, water overflows fresh water layer 2b and flows through an overflow system 10b to a vaporizing pond 11. Water of a non-convection layer 3b also flows to the vaporizing pond 11, and after it joins a quantity of water overflowing the pond B, and the joined water is fed to the pond A with the aid of a solute recovery pump 12. Since the concentration and temperature of water in the pond A are reduced, a repair work in water is also facilitated. When a repair work is completed through reverse operation, high concentration hot water in the pond B is poured to the bottom of the pond A, and low concentration cold water overflowing the pond A flows to the surface of the pond B through the vaporizing pond 11.

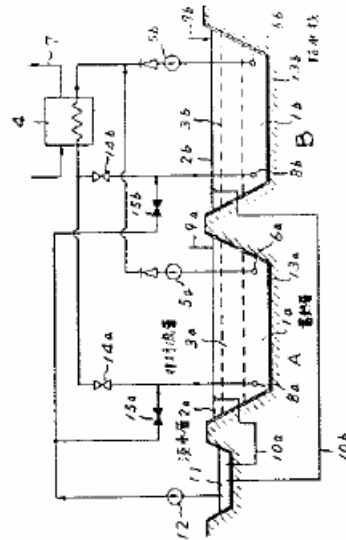
Classifications:

International (IPC 8-9): F24J2/00 F24J2/04 (Advanced/Invention);
F24J2/00 F24J2/04 (Core/Invention)

International (IPC 1-7): F24J2/00

CPC: F24S10/13 Y02E10/44

European: F24J2/04C2 Y02E10/44

**Family:**

Publication number	Publication date	Application number	Application date
JP63058061 A2	19880312	JP19860201522	19860829

Priority:

JP19860201522 19860829

Probable Assignee:

TOSHIBA CORP

Assignee(s): (std):

TOSHIBA CORP

Inventor(s): (std):

SEKIYA EIJI

83) Family number: 23314679 (US2005081517A)

© PatBase

Title: EXTRACTING POWER FROM A FLUID FLOW

Abstract: An apparatus for extracting power from a fluid flow, the apparatus comprises a fluid driveable engine, a fluid directing arrangement formed to define a channel in the flow of a primary fluid, the channel having a flow accelerating constriction shaped such that the primary fluid accelerates as it passes through the flow accelerating constriction, the fluid directing arrangement being formed to impart a rotational flow component to the primary fluid entering the flow accelerating constriction thereby creating a radial pressure gradient in the primary fluid as it passes through the flow accelerating constriction, a conduit for directing flow of a driving fluid, the driving fluid and the primary fluid being different fluids, the conduit being in fluid communication with the fluid driveable engine and a portion of the channel having accelerated fluid flow and in which the flow of driving fluid through the conduit via the rotational flow of the primary fluid in the flow accelerating constriction acts to drive the fluid driveable engine and the conduit delivers driving fluid to the fluid directing arrangement such that the driving fluid is drawn substantially along the central axis of the rotational flow.

Classifications:

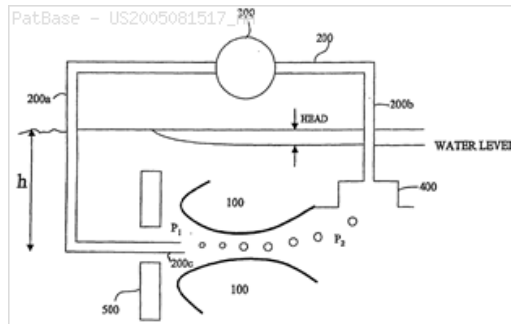
International (IPC 8-9): F03B13/00 F03B13/10 F03B13/12 F03B13/26 F03B17/00 F03B17/06 (Advanced/Invention); F03B13/00 F03B17/00 (Core/Invention)

International (IPC 1-7): F03B13/00 F03B13/10 F03B13/12 F03B13/26 F03B17/00 F03B17/06 F16D31/02 H02P9/04

CPC: F03B17/00 Y02E10/20 Y02E10/28 Y02E10/38

European: F03B17/00 Y02E10/20 Y02E10/28 Y02E10/38

US: 290/43 290/43P 290/52 290/53 290/54 415/2.1 60/398

**Family:**

Publication number	Publication date	Application number	Application date
AT330120 E	20060715	AT20030712375T	20030319
AT331886 E	20060715	AT20030710001T	20030319
AU2003214429 AA	20031008	AU20030214429	20030319
AU2003216837 AA	20031008	AU20030216837	20030319
AU2003216837 BB	20080731	AU20030216837	20030319
CA2478849 AA	20040910	CA20032478849	20030319

CA2478849 C	20110531	CA20032478849	20030319
CA2478859 AA	20040910	CA20032478859	20030319
CA2478859 C	20100817	CA20032478859	20030319
CN1643247 A	20050720	CN20038006425	20030319
CN1643248 A	20050720	CN20038006473	20030319
DE60306126 D1	20060727	DE20036006126	20030319
DE60306508 D1	20060810	DE20036006508	20030319
EP1488101 A1	20041222	EP20030712375	20030319
EP1488101 B1	20060614	EP20030712375	20030319
EP1492956 A1	20050105	EP20030710001	20030319
EP1492956 B1	20060628	EP20030710001	20030319
ES2266794 T3	20070301	ES20030712375T	20030319
GB200206623 A0	20020501	GB20020006623	20020320
GB200229783 A0	20030129	GB20020029783	20021220
JP2005520984 T2	20050714	JP20030578734T	20030319
JP2005520985 T2	20050714	JP20030578735T	20030319
NZ535961 A	20061130	NZ20030535961	20030319
NZ535962 A	20061130	NZ20030535962	20030319
PT1488101 T	20061031	PT20030712375T	20030319
US2005081517 AA	20050421	US20030508316	20030319
US2005099011 AA	20050512	US20030508334	20030319
US7132758 BB	20061107	US20030508334	20030319
US7150149 BB	20061219	US20030508316	20030319
WO03081029 A1	20031002	WO2003GB01171	20030319
WO03081030 A1	20031002	WO2003GB01173	20030319

Priority:

GB20020006623 20020320 GB20020029783 20021220 WO2003GB01173 20030319
WO2003GB01171 20030319

Probable Assignee: HYDROVENTURI LTD

Assignee(s): (std): HASSARD JOHN ; HYDRO VENTURI LTD ; HYDROVENTURI LTD ; ROCHESTER GEOFFREY KENNETH ; PULLEN KEITH ; RV CO LTD

Assignee(s): ROCHESTER GEOFFREY K ; HYDROVENTURI LIMITED ; HYDRO VENTURI LIMITED

Inventor(s): (std): JOHN HASSARD ; KEITH PULLEN ; KENNETH ROCHESTER GEOFFREY ; ROCHESTER GEOFFREY K ; ROCHESTER KENNETH ; ROCHESTER GEOFFREY KENNETH ; PULLEN KEITH ; HASSARD JOHN

Inventor(s): ROCHESTER GEOFFREY ; GEOFFREY KENNETH ROCHESTER

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; ROBIC; NIXON AND VANDERHYE PC

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

84) Family number: 2332709 (US4425787A)

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Title: Method of and apparatus for measuring the density profile of a liquid layer

Abstract: Apparatus for measuring the density profile of a layer of liquid includes a plurality of individual tubes arranged in side-by-side fashion, each of the tubes having an inlet opening in its lower end. A vacuum manifold is connected to the apertured upper ends of the tubes. The apertures in the lower ends of the tubes are vertically staggered and the tubes are vertically oriented with the lower ends of the tubes immersed in the liquid, so that the inlet openings are differentially spaced from the surface of the liquid. The application of a vacuum to the tubes causes liquid from the different levels to be drawn into the tubes, the height of the liquid in the tubes above the surface being proportional to the density of the liquid drawn into the tubes through the inlets.

Classifications:

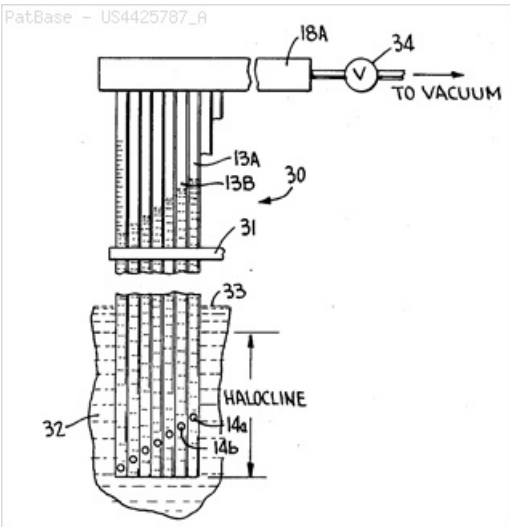
International (IPC 8-9): G01N9/26 (Advanced/Invention); G01N9/00 (Core/Invention)

International (IPC 1-7): G01N9/00 G01N9/12 G01N9/26

CPC: G01N9/26

European: G01N9/26

US: 73/32R 73/438



Family:

Publication number	Publication date	Application number	Application date
IL64900 A0	19820331	IL19820064900	19820131
IL64900 A1	19860131	IL19820064900	19820131
US4425787 A	19840117	US19810302576	19810915

Priority:

US19810302576 19810915

Probable Assignee: SOLMAT SYSTEMS LTD**Assignee(s):** (std): SOLMAT SYST**Assignee(s):** SOLMAT SYSTEMS LTD ; SOLMAT SYSTEMS LTD A CORP OF ISRAEL**Inventor(s):** (std): SARAF ISRAEL E**Agent(s):** WOLFF BREGMAN AND GOLLER**85) Family number: 1455715 (US4055145A)**

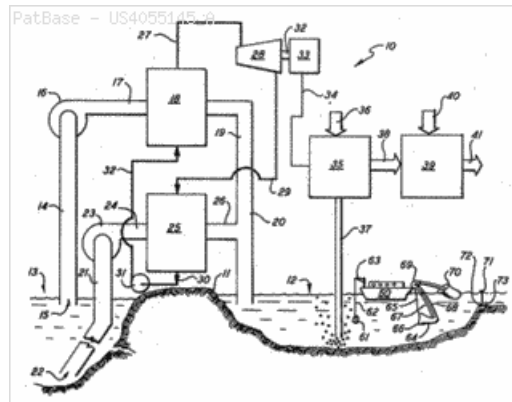
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Title: SYSTEM AND METHOD OF OCEAN THERMAL ENERGY CONVERSION AND MARICULTURE

Abstract: An integrated system for converting ocean thermal energy to electrical power for use in synthesis of anhydrous ammonia and a mariculture operation for raising a selected species of marine fauna. The mariculture operation is carried out in a lagoon located adjacent to a deep ocean region where the surface water temperature is at least 21 DEG C and the deep nutrient-rich water temperature is no more than about 10 DEG C. A separate working fluid, such as ammonia, operates in a Rankine cycle between the warm and cold seawater temperatures. The deep ocean water is used to condense the working fluid and is then mixed with warm surface water that has been used to evaporate the same working fluid in a closed power cycle. The resulting mixture is directed to the lagoon, where the nutrient-rich component contributes to the growth rate of a selected mariculture species. The warm surface water temperature may be increased by creating a monomolecular evaporation retarding layer in the ocean surface surrounding the power plant intake.

Classifications:**International (IPC 8-9):** A01K61/00 (Advanced/Invention);

A01K61/00 (Core/Invention)

International (IPC 1-7): A01K61/00**CPC:** F03G7/05 Y02E10/34 A01K63/065**European:** A01K61/00**US:** 119/2 119/204 119/212 165/45 203/22 60/641.7**Family:**

Publication number	Publication date	Application number	Application date
US4055145 A	19771025	US19760727681	19760929

Priority:

US19760727681 19760929

Probable Assignee: HERONEMUS WILLIAM E**Assignee(s):** (std): HERONEMUS WILLIAM E ; MAGER DAVID**Inventor(s):** (std): HERONEMUS WILLIAM E ; MAGER DAVID**86) Family number: 8583733 (US4336999A)**

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Title: SELECTIVE MIXER FOR SOLAR POND AND METHOD OF USING SAME

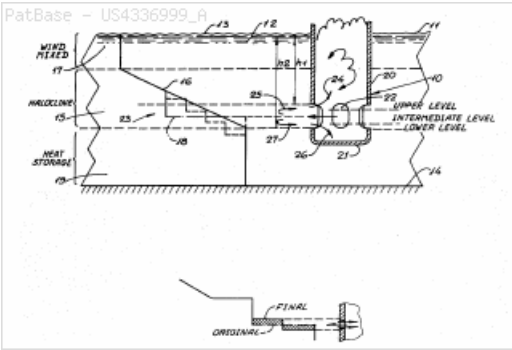
Abstract: The density profile of a halocline, which increases monotonically with depth, is modified by drawing water from different levels of the halocline (and therefore of different densities) into a mixing chamber, mixing the water in the mixing chamber and discharging the water in the mixing chamber into the halocline intermediate the levels from which the water is drawn. In one technique, a closed chamber is inserted into the halocline, the chamber having a vertically oriented slot defining a preselected layer of the halocline. The contents of the chamber are mixed to establish a uniform density equal to the average density of the water in the preselected layer. As a consequence, the vertical variation in density across the slot between the water inside and outside the chamber establishes a static pressure differential which causes water in the layer to flow into and out of the chamber until the density of the layer is uniform. In another technique, water is pumped into a mixing chamber from two different levels in the halocline and discharged into the halocline intermediate the levels from which the water is drawn. With this arrangement, the density of the water in the mixing chamber can be adjusted in accordance with the relative amount of water pumped from each level.

Classifications:**International (IPC 8-9):** B01F13/02 C02F1/14

F24J2/04 (Advanced/Invention);

B01F13/00 C02F1/14 F24J2/04 (Core/Invention)

International (IPC 1-7): B01F13/02 B01F5/12**CPC:** Y02A20/212 B01F13/0294 Y02E10/44 C02F1/14 F24S10/13



Family:

Publication number	Publication date	Application number	Application date
US4336999 A	19820629	US19800149564	19800514

Priority:

US19780889987 19780324 US19800149564 19800514

Probable Assignee: SOLMAT SYST
Assignee(s): (std): SOLMAT SYST
Assignee(s): SOLMAT SYSTEMS LTD
Inventor(s): (std): ASSAF GAD

87) Family number: 6951741 (US4113401A)

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Title: METHOD OF PAVEMENT REPAIR

Abstract: A method of repairing pavements employing an elastomeric pavement repair composition comprised of paving grade asphalt and rubber. The asphalt is heated to an elevated temperature and the rubber is combined therewith. The resulting composition is mixed to form a hot jellied composition which is applied to cracked or distressed pavements to repair the same. The resulting composition can also be formed into a ready made elastomeric cold patch which is applied to cracked pavement surfaces after tacking of the surface.

Classifications:

International (IPC 8-9): E01C11/00 E01C7/18

E01C7/26 (Advanced/Invention);

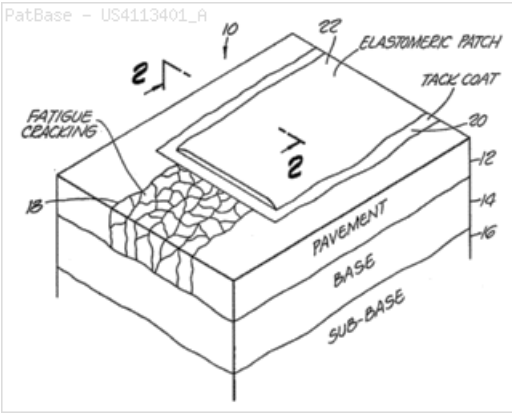
E01C11/00 E01C7/00 (Core/Invention)

International (IPC 1-7): E01C7/35

CPC: E01C7/187 E01C7/265 E01C11/005

European: E01C11/00B E01C7/18D E01C7/26C

US: 404/75



Family:

Publication number	Publication date	Application number	Application date
US4113401 A	19780912	US19770784615	19770404

Priority:

US19730376915 19730705 US19750585836 19750611 US19760683381 19760505
US19760589190 19761021

Probable Assignee: MCDONALD CHARLES H
Assignee(s): (std): MCDONALD CHARLES H
Assignee(s): FIRST INTERSTATE BANK OF ARIZONA ; JACOBSON CARL C ; JOHNSON E J
Inventor(s): (std): MCDONALD CHARLES H

88) Family number: 7579755 (US4177146A)

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Title: Methods and apparatus for continuously endowing liquid with mechanical energy by osmosis

Abstract: Liquid is continuously endowed with mechanical energy by continuously osmosing it across an osmotic membrane across which is maintained a substantial pressure difference of osmotic pressures. Continuity is insured by continuously flowing hypotonic liquid against and away from the hypotonic surface of the membrane, continuously flowing hypertonic liquid against and away from the hypertonic surface of the membrane, and continuously flowing permeate essentially limitlessly away from the

hypertonic surface. The substantial osmotic pressure difference across the membrane is maintained, in part, by keeping the hypertonic liquid at or near saturation.

Classifications:

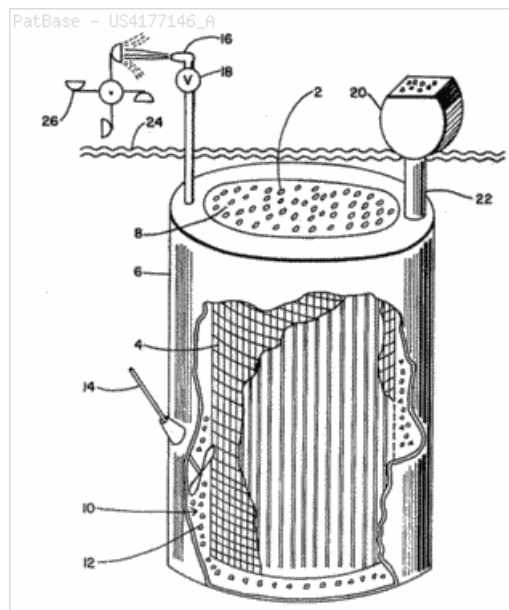
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International (IPC 1-7): B01D13/00

CPC: B01D61/002 F03G7/005

European: B01D61/00B F03G7/00C

US: 210/137 210/321.87 60/326 60/327 60/721



Family:

Publication number	Publication date	Application number	Application date
US4177146 A	19791204	US19750574302	19750505

Priority:

US19750574302 19750505

Probable Assignee: CAMIRAND WAYNE M

Assignee(s): (std): CAMIRAND WAYNE M ; POPPER KAREL

Inventor(s): (std): CAMIRAND WAYNE M ; POPPER KAREL

89) Family number: 3085766 (US4849171A)

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Title: Corrosion inhibition of sodium and calcium chloride

Abstract: A corrosion inhibited sodium and calcium chloride composition preferably in granular form, which is uniformly coated with a minute to minor quantity of an inhibitor comprising chiefly superphosphate and a minor amount of magnesium oxide. There is also disclosed a method for inhibiting corrosion of sodium and calcium chloride which comprises supplying to the metal surface which is exposed to corrosive attack by sodium and calcium chloride, a minute quantity of an inhibitor comprising chiefly superphosphate and a minor amount of magnesium oxide. The magnesium oxide functions to cement the inhibitor as a tenacious coating on the salt granules, and also to enhance the effectiveness of the phosphate corrosion inhibition.

Classifications:

International (IPC 8-9): C09K3/18 C23F11/18 (Advanced/Invention);

C09K3/18 C23F11/08 (Core/Invention)

International (IPC 1-7): C23F11/08

CPC: C09K3/185 C23F11/187

European: C09K3/18B C23F11/18M

US: 252/387 252/389.2 252/389.22 422/12 422/13 422/18 422/7

Family:

Publication number	Publication date	Application number	Application date
US4849171 A	19890718	US19870020947	19870209

Priority:

US19870020947 19870209

Probable Assignee: MURRAY BRUCE

Assignee(s): (std): MURRAY BRUCE

Assignee(s): CLAWSON CARL

Inventor(s): (std): MURRAY BRUCE

90) Family number: 33813778 (US2006263646A)

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Title: REVERSE ELECTRODIALYSIS FOR GENERATION OF HYDROGEN

Abstract: A system combines reverse electrodialysis and electrolysis to produce hydrogen gas from the controlled mixing of fresh and salt water. A battery stack is formed of alternating membranes of selectively cation-permeable and anion-permeable membranes. Alternating solutions of fresh and salt water flow between the alternating membrane types, causing cations to flow in one direction and anions in the opposite direction, generating a current and cumulative voltage through the stack-this is reverse

Classifications:

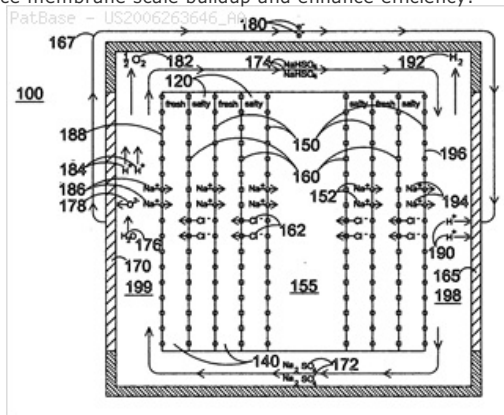
H01M8/16 (Advanced/Invention);

C25B1/00 H01M8/10 H01M8/16 (Core/Invention)

CPC: C25B1/02 H01M8/0656 H01M8/10 H01M8/227

European: C25B1/02 H01M8/06B6 H01M8/10 H01M8/22D

US: 205/637 429/2 429/2P 429/32 429/38 429/422 429/422S 429/492 429/492S



Publication number	Publication date	Application number	Application date
US2006263646 AA	20061123	US20060437603	20060520

US20050683281P 20050521 US20060437603 20060520

Assignee(s): (std): SEALE JOSEPH B

Inventor(s): (std): SEALE JOSEPH B

Inventor(s): SEALE JOSEPH

Agent(s): NILS PETER MICKELSON

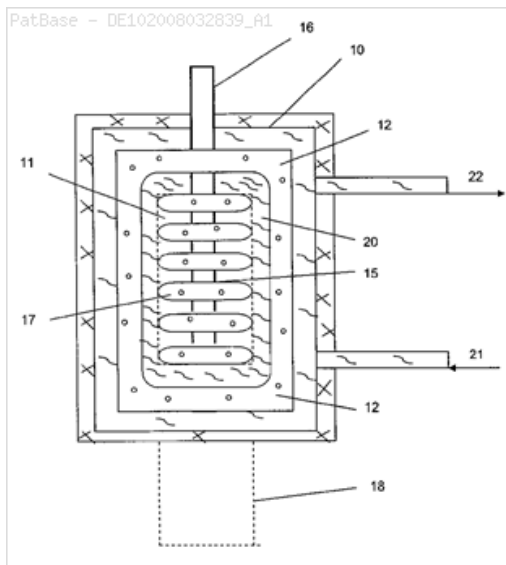
Abstract: The device has a container (10) comprising a closed interior space (11) containing fluid (20). A rotatable shaft (15) is guided in the interior space of the container. The fluid in the interior space of the container and the shaft are move relatively together, so as to develop heat in the fluid. The heat is directly dissipated as useful heat. The shaft and/or disks (17) firmly connected with the shaft and/or an interior side of a container wall (12) are coated with a rigid, sturdy and open-porous foam material e.g. metal foam material and ceramic foam material.

Classifications:

International (IPC 8-9): F24J3/00 (Advanced/Invention)

CPC: F24V40/00

European: F24J3/00B



Publication number	Publication date	Application number	Application date
DE102008032839 A1	20100121	DE200810032839	20080714

DE200810032839 20080714

PatBase PDF Export - Page: 65 13/05/2019

Assignee(s): (std): GNISA LTD
Inventor(s): (std): GIRLICH DIETER ; GNISA FRANK

92) Family number: 29418804 (US2003201644A)

PatBase

Title: ALL-WEATHER ENERGY AND WATER PRODUCTION VIA STEAM-ENHANCED VORTEX TOWER

Abstract: Complex of additional or modified process steps and correspondent new or modified designs of units of steam-enhanced vortex electric station is described as continuation-in-part application out of parent application "All-Weather Energy and Water Production via Steam-Enhanced Vortex Tower", Kaploun S., Ser. No. 10/133,488, Filing Date Apr. 29, 2002, said complex makes said kind of station available for stable long operation in majority of the climatic zones and power loading regimes, including regions with winter negative temperatures during the calm or insufficient winds and/or low loads, said complex comprises: heat accumulation/release water-steam-air system using excessive solar, geothermal or/and waste low-temperature heat; large-rating three-phase vortex electric generator with hollow flow-through drum rotated by inside upward column vortex airflow; adjusted to said conditions modifications of voltage inducing magnetic concentrators used in described before [9] magneto-vortex electric generator

Classifications:

International (IPC 8-9): F03B13/00 F03B13/10 F03D9/00

H02P9/04 (Advanced/Invention);

F03B13/00 F03D9/00 H02P9/04 (Core/Invention);

F03H (Subclass/Invention)

International (IPC 1-7): F03B13/00 F03B13/10 F03D9/00 F03H H02P9/04

CPC: Y02B10/70 Y02B10/30 Y02P80/22 Y02P80/24 F05B2240/132

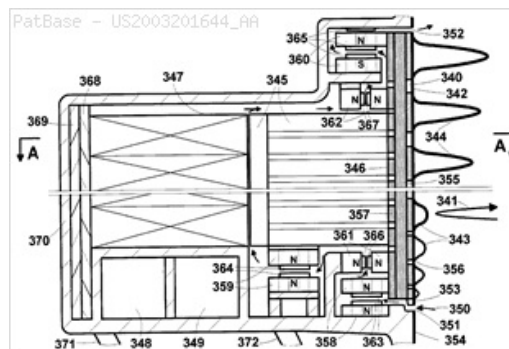
F05B2260/24 Y02E10/465 Y02E10/725 F03D9/39 F03D9/007 H02K7/183

F03D9/25 Y02E10/728

European: F03D9/00C H02K7/18A2W R05B240/132 R05B260/240

Y02B10/30 Y02E10/46U Y02E10/72H

US: 290/43 290/43P 290/44 290/54 290/54P 290/55



Family:

Publication number	Publication date	Application number	Application date
AU2003209639 AA	20031117	AU20030209639	20030303
AU2003209639 AH	20031117	AU20030209639	20030303
US2003201644 AA	20031030	US20020310888	20021206
US2003201646 AA	20031030	US20020133488	20020429
US6943461 BB	20050913	US20020133488	20020429
US7154190 BB	20061226	US20020310888	20021206
WO03093673 A2	20031113	WO2003IL00158	20030303
WO03093673 A3	20040108	WO2003IL00158	20030303

Priority:

US20020133488 20020429 US20020310888 20021206 WO2003IL00158 20030303

Probable Assignee: KAPLOUN SOLOMON

Assignee(s): (std): KAPLOUN SOLOMON

Inventor(s): (std): KAPLOUN SOLOMON ; SOLOMON KAPLOUN

Agent(s): LO TOMPAKOV; TOMPAKOV GALINA; GALINA

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

93) Family number: 1959810 (US4402795A)

PatBase

Title: REVERSE ABSORPTION HEAT PUMP AUGMENTED DISTILLATION PROCESS

Abstract: The invention provides a means for reducing the energy consumed by thermally activated separation processes such as fractional distillation. This is done by recovering at least part of the reject heat from such processes and upgrading it for recycle back to input heat. The upgrading is accomplished by another low temperature source of heat which may also be the separation process reject heat. A simple and reliable heat pump using the reverse absorption principle is incorporated in the separation process to accomplish this upgrading.

Classifications:

International (IPC 8-9): B01D3/00 B01D3/14 B01D3/32 B01D53/14

F25B15/00 F25B30/04 (Advanced/Invention);

B01D3/14 B01D53/14 F25B15/00 (Advanced/Non-invention);

B01D3/00 B01D3/14 B01D53/14 F25B15/00 F25B30/00 (Core/Invention)

International (IPC 1-7): B01D3/00 B01D3/14 B01D3/32 B01D3/42

B01D53/14 F25B15/06

CPC: Y10S203/04 Y10S203/11 Y02B30/52 B01D3/322 B01D3/007

F25B15/008 F25B30/04 Y02A40/965

European: B01D3/00D B01D3/32B F25B15/00F F25B30/04 Y02B30/12B

US: 202/184 203/100 203/19 203/25 203/42 203/DIG.4 261/128 62/101 62/324.2 62/476

Publication number	Publication date	Application number	Application date
AT33945 E	19880515	AT19810902678T	19810918
AU198176443 A1	19820414	AU19810076443	19810918
AU547411 B2	19851017	AU19810076443	19810918
BR8108800 A	19820810	BR19810008800	19810918
CA1180671 A1	19850108	CA19810386147	19810917
DE3176727 D1	19880609	DE19813176727	19810918
DK222282 A	19820517	DK19820002222	19820517
EP0059748 A1	19820915	EP19810902678	19810918
EP0059748 A4	19840209	EP19810902678	19810918
EP0059748 B1	19880504	EP19810902678	19810918
JP57501416 T2	19820812	JP19810503189T	19810918
JP62047405 B4	19871007	JP19810503189T	19810918
US4402795 A	19830906	US19800188527	19800918
WO8200958 A1	19820401	WO1981U501255	19810918

US19800188527 19800918 CA19810386147 19810917 EP19810902678 19810918
WO1981US01255 19810918

Assignee(s): (std): ERICKSON D ; ERICKSON D C ; ERICKSON DONALD C

Inventor(s): (std): ERICKSON D C ; ERICKSON DONALD C ; ERICKSON DONALD CHARLES ; ERICKSON D

Agent(s): SWABEY OGILVY RENAULT

Designated states: AT AU BR CH DE DK FR GB JP LI LU NL SE SU

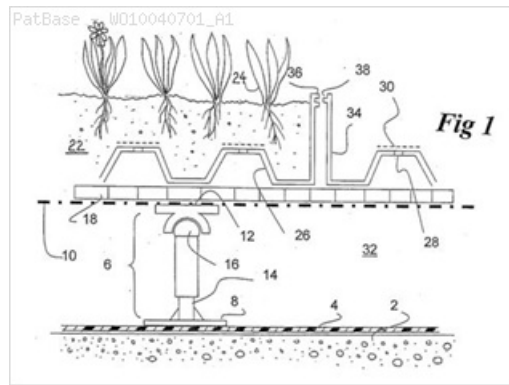
Abstract: A covering system and a method for covering a roof with a plant mat comprising a series of modular trays (20) placed in an adjacent manner. This system comprises base elements (6) of adjustable height placed on top of a sealing layer, a grating (18) formed of elements placed in an adjacent manner on these base elements (6) and supporting the modular trays (20). The modular trays (20) comprise a polygonal bottom pierced with calibrated holes (28), upwardly extending sides (34) and reversible interlocking means (36, 38).

International (IPC 8-9): A01G1/00 A01G9/02 E04D1/28 E04D11/00

E04D13/00 E04F15/02 E04F15/024 (Advanced/Invention);
A01G9/02 E04D11/00 E04F15/02 E04F15/024 (Advanced/Non-invention);
E04F15/024 (Core/Invention)

CPC: E04D11/002 E04D11/007 E04F15/02482 Y02B80/32 Y02A30/254 A01G9/033

European: A01G1/00C E04D11/00B E04D11/00D1 E04F15/024D6B4
Y02B80/32



Family:

Publication number	Publication date	Application number	Application date
AU2009301252 AA	20100415	AU20090301252	20091005
CA2739764 AA	20110406	CA20092739764	20091005
CL2011000751 A1	20120615	CL20110000751	20110405
CN102171404 A	20110831	CN200980139303	20091005
CN102171404 B	20130403	CN200980139303	20091005
DE602009014472 D1	20130529	DE200960014472T	20091005
EP2172096 A1	20100407	EP20080165911	20081006
EP2331768 A1	20110615	EP20090783721	20091005
EP2331768 B1	20130327	EP20090783721	20091005
KR20110066223 A	20110616	KR20117010299	20091005
WO10040701 A1	20100415	WO2009EP62873	20091005

Priority:

EP20080165911 20081006 EP20090783721 20091005 WO2009EP62873 20091005

Probable Assignee: GREENSKIN DVMH

Assignee(s): (std): DANG VU TOAN ; HERMANS M MARC ; HERMANS MARC ; VU TOAN DANG ; MARC HERMANS ; TOAN DANG VU

Assignee(s): GREENSKIN DVMH

Inventor(s): (std): DANG VU TOAN ; HERMANS M MARC ; HERMANS MARC ; MARC HERMANS ; TOAN DANG VU ; VU TOAN DANG

Inventor(s): HERMANS MARC DANG VU TOAN

Agent(s): PHILLIPS ORMONDE FITZPATRICK; NORTON ROSE OR SENCRL SRL LLP; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; VILLASECA; BUSSE AND BUSSE PATENT U RECHTSANWAELTE PARTNERSCHAFT MBB; VANDEBERG MARIE PAULE L G; VANDEBERG MARIE PAULE LG; VANDEBERG MARIE PAULE ET AL

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

95) Family number: 47616831 (US7832959B)

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Title: METHOD OF RESTORATION OF A HIGHLY SALINE LAKE

Abstract: A method of restoring a lake that has a high saline level is disclosed herein. In order to restore the lake, a series of concentric dikes or levees are provided that separate the lake into a plurality of smaller lake sections, each having a water surface. The smaller lake sections include an outer lake section which is next to the periphery of the lake and one or more inner lake sections. Each dike and each smaller lake section water surface have an elevation. Water is flowed from an influent source to the outer lake section and then to each of the inner lake sections. The outer lake section surface has a higher elevation. The inner lake section surfaces have cascading lower surface elevations. At a central area, a breathing brine area is provided that is surrounded by the smaller lake sections to provide an area that can be used to concentrate brine. The smaller lake sections can have differing salinity levels for sustaining diverse marine and plant life.

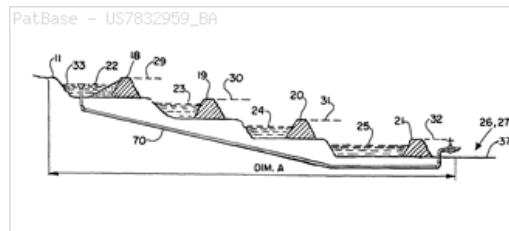
Classifications:

International (IPC 8-9): E02B13/00 (Advanced/Invention)

CPC: Y02A40/228 E02B3/00 E02B2201/02

European: E02B3/00 P02B201/02

US: 210/170.01 210/170.11 405/52 405/74 405/80



Family:

Publication number	Publication date	Application number	Application date
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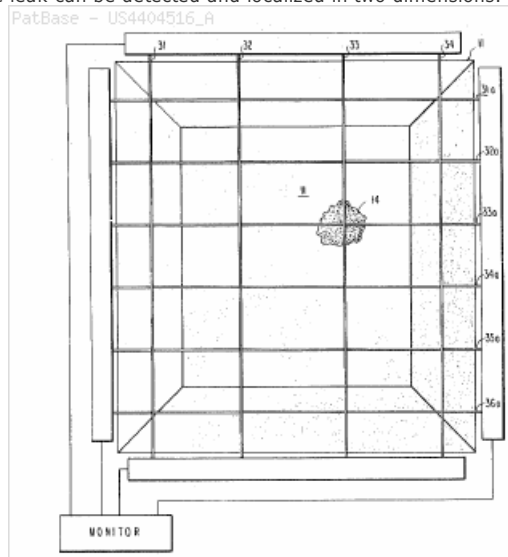
US20050672310P 20050418 US20060379153 20060418 US20100943712 20101110

Assignee(s): (std): BEAN STUYVESANT L L C ; C F BEAN L L C ; DE GROOT JORRIT K ; GROEN PIETER VAN
Assignee(s): C F BEAN LLC ; BEAN STUYVESANT LLC
Inventor(s): (std): DE GROOT JORRIT K ; GROEN PIETER VAN
Agent(s): GARVEY SMITH NEHRBASS AND NORTH LLC ; CHARLES C ; VANESSA M

Title: System for detecting leaks from liquid-containing reservoirs and conduits

Abstract: A leak detection and location system is disclosed for chemical storage ponds, conduits and tanks containing environmentally harmful materials. The leak detection system comprises a network of electrically conductive wires placed directly under the reservoir or conduit. The wires are so constructed that should a leak occur, chemicals which escape will corrode the wires or, alternatively, degrade the insulation around the wires, thereby causing a change in the electrical properties of the wires. By detecting the change in electrical properties for each wire affected, the leak can be detected and localized in two dimensions.

International (IPC 1-7): G01M3/16 G01R31/08 G01R31/12
CPC: G01M3/045 G01M3/16 G01M3/18
European: G01M3/04B2 G01M3/16 G01M3/18
US: 324/52 324/525 324/54 324/557 324/65R 324/716 324/718 340/605
 405/129.5 405/52 73/40.5R 73/49.2



Publication number	Publication date	Application number	Application date
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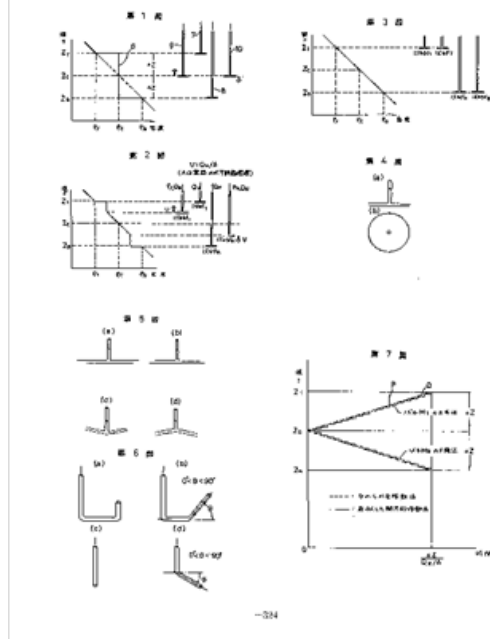
US19800180724 19800825 US19800201841 19801029 US19810298414 19810901

Probable Assignee:	JOHNSON JR VICTOR R
Assignee(s): (std):	JOHNSON JR VICTOR R
Inventor(s): (std):	JOHNSON JR VICTOR R

Title: METHOD OF RESTORING DENSITY GRADIENT OF STORED LIQUID

Abstract: PURPOSE: To restore to an old linear gradient rapidly by fixing nozzles above and below a section where the linear density gradient in the density gradient layer of a solar pond was broken and providing a pair of nozzles vertically and freely movable at the central section of the above said section. CONSTITUTION: In a fluid storing pond which has a density gradient layer in which the density changes linearly according to the depth, the highest section and the lowest section of a section 6 where the linearity of this density gradient layer was broken are provided with fixed nozzles 7 and 8 respectively and at the central section of the section where this linearity was broken a pair of movable nozzles 9 and 10 for ascending and descending are provided. Namely, from the nozzles 7 and 8, a specified amount of the fluid is discharged out of the storing pond. Further, from the nozzle 9 for ascending a specified amount of fluid which has the fluid density of the highest section of the section 6 where the linearity was broken is discharged and from the nozzle 10 for descending a specified amount of fluid which has the fluid density of the lowest section of the section 6 where the linearity was broken is discharged, and at the same time the movable nozzles ascend or descend at a specified speed to restore the broken density gradient.

International (IPC 8-9): F24J2/00 F24J2/04 (Advanced/Invention);
F24J2/00 F24J2/04 (Core/Invention)
International (IPC 1-7): F24J2/00
CPC: F24S10/13 Y02E10/44
European: F24J2/04C2 Y02E10/44

**Family:**

Publication number	Publication date	Application number	Application date
JP1037659 B4	19890808	JP19850258495	19851120
JP1556668 C3	19900423	JP19850258495	19851120
JP62119364 A2	19870530	JP19850258495	19851120

Priority:

JP19850258495 19851120

Probable Assignee: NIPPON KOKAN KK**Assignee(s):** (std): NIPPON KOKAN KK**Assignee(s):** NIPPON KOKAN NKK KK ; CHUSHO KIGYO JIGYODAN**Inventor(s):** (std): TAKAO SHINGO ; SUZUKI OSAMU ; SHINYASHIKI AKINOBU ; OTSUBO HIROYUKI**Inventor(s):** OTSUBO HIROYUKI**98) Family number: 30518917** (US2006278079A)

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Title: ISOTHERMAL GAS-FREE WATER DISTILLATION

Abstract: The present invention provides a method of and apparatus 1 for water desalination comprising transferring water vapour from salt-water in a vapourization zone 7, via a water vapour transfer zone 12, to a condensation zone 11, and condensing said water vapour into fresh-water. The water vapour transfer zone 12 is maintained substantially free of any gas other than water vapour. Heat is supplied to the vapourization zone 7 and extracted from the condensation zone 11, at relative rates such that there is a net transfer of water from the vapourization zone to the condensation zone. The invention also provides a method of and apparatus for degassing salt water using at least two degassing chambers 17 A, 17 B each provided with a valved vent 47 and a valved inlet 21,29,90,91, with a valved pipe circuit 17 a, 72 - 82,85 - 87, having a pump 71. The pump and valved circuit transfer water from one chamber 17 A to another 17 B so as to reduce the pressure in the one chamber 17 A inducing the release of dissolved gas, and expelling gas above the water out of the other chamber 17 B. The direction of water transfer is then reversed so as to release dissolved gas in the other chamber 17 B and expel gas in the one chamber 17 A.

Classifications:

International (IPC 8-9): B01D19/00 B01D3/10 B01D3/42 C02F1/04 C02F1/14 C02F1/20 C02F11/14 (Advanced/Invention); C02F9/00 (Advanced/Non-invention);

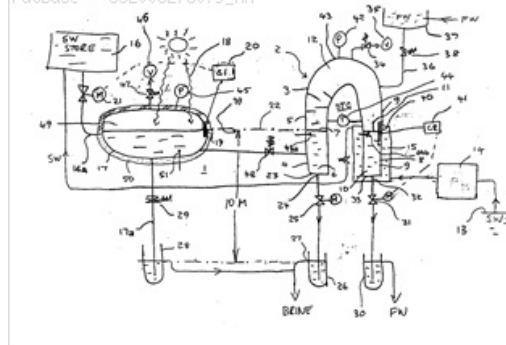
B01D19/00 C02F1/04 C02F1/14 C02F1/20 C02F11/14 (Core/Invention); C02F9/00 (Core/Non-invention)

International (IPC 1-7): C02F1/14 C02F1/20 C02F11/14

CPC: Y10S159/16 Y10S203/04 Y10S203/18 Y02A20/128 Y02A20/212 C02F1/20 C02F1/04 C02F9/00 C02F2103/007 C02F2103/06 C02F2103/08 C02F2201/009

European: C02F1/04 C02F1/20 M02F103/00H M02F103/06 M02F103/08 M02F201/00I M02F201/00P M02F9/00

US: 159/44 159/DIG.16 202/160 202/176 202/205 202/81 203/1 203/10 203/11 203/2 203/39 203/91 203/DIG.17 203/DIG.4 95/243 95/243P 95/244 95/266 96/157 96/173 96/174 96/193

**Family:**

Publication number	Publication date	Application number	Application date
DE602005036960 D1	20130110	DE200560036960T	20050222

EP1716082 A1	20061102	EP20050708430	20050222
EP1716082 B1	20121114	EP20050708430	20050222
ES2402815 T3	20130509	ES20050708430T	20050222
GB200404270 A0	20040331	GB20040004270	20040226
US2006278079 AA	20061214	US20060507163	20060821
US7811420 BB	20101012	US20060507163	20060821
WO05082784 A1	20050909	WO2005GB00651	20050222

Priority:

GB20040004270 20040226 EP20050708430 20050222 WO2005GB00651 20050222

Probable Assignee: SONANDER SVEN OLOF

Assignee(s): (std): SONANDER SVEN O ; SONANDER SVEN OLOF

Inventor(s): (std): SONANDER SVEN O ; SONANDER SVEN OLOF

Inventor(s): SONANDER SVEN ; SONANDER SVEN OLOF HILLEND BY DUNFERMLINE

Agent(s): MARKS AND CLERK LUXEMBOURG LLP; NEWELL CAMPBELL; YOUNG AND BASILE PC; YOUNG BASILE HANLON AND MACFARLANE PC

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 KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE 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

99) Family number: 31457924 (US2006166343A)

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Title: PHOTOSYNTHETIC HYDROGEN PRODUCTION

Abstract: A process for the production of hydrogen, comprising the steps of: (i) providing a photosynthetic microorganism having electron transfer capability through a photosynthetic "light" reaction pathway and through a respiratory electron transfer chain involving an oxidative phosphorylation pathway, and which expresses a hydrogenase, wherein regulation of the oxidative phosphorylation pathway is disrupted with the result that electron flow along the respiratory electron transfer chain toward cytochrome oxidase (complex IV) is reduced; ii) culturing the microorganism under microoxic and illuminated conditions; and (iii) collecting evolved hydrogen.

Classifications:

International (IPC 8-9): C01B3/02 C07H21/04 C12N1/12 C12N1/21

C12N13/00 C12P3/00 H01M8/16 (Advanced/Invention);

C02F3/34 C12N15/09 H01M8/06 (Advanced/Non-invention);

C01B3/00 C12N1/12 C12N13/00 C12P3/00 H01M8/16 (Core/Invention);

C02F3/34 C12N15/09 H01M8/06 (Core/Non-invention)

International (IPC 1-7): C01B3/02 C12P3/00 H01M8/16

CPC: C02F3/34 C12N1/12 C12N13/00 C12P3/00 C12R1/89 H01M8/0606

European: C12N1/12 C12N13/00 C12P3/00 C12R1/89 M02F3/34

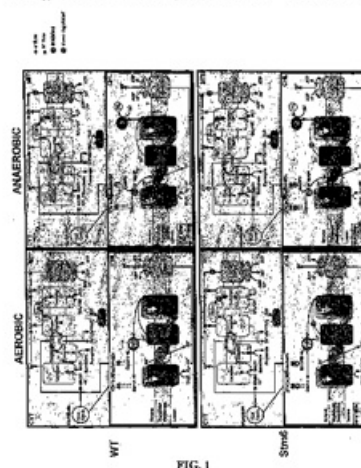
T01M8/06B

US: 435/168 435/168P 435/252.3 435/252.300S 435/253.6 435/257.2

435/257.6 536/23.2

PatBase - US2006166343_AA

Patent Application Publication Jul. 27, 2006 Sheet 1 of 16 US 2006/0166343 A1



Family:

Publication number	Publication date	Application number	Application date
AT444373 E	20091015	AT20040737534T	20040707
AU2003903453 A0	20030717	AU20030903453	20030707
AU2004253603 AA	20050113	AU20040253603	20040707
AU2004253603 BB	20091224	AU20040253603	20040707
DE602004023393 D1	20091112	DE200460023393T	20040707
EP1641712 A1	20060405	EP20040737534	20040707
EP1641712 A4	20070711	EP20040737534	20040707
EP1641712 B1	20090930	EP20040737534	20040707
ES2333428 T3	20100222	ES20040737534T	20040707
JP2007525199 T2	20070906	JP20060517902T	20040707
JP4696063 B2	20110608	JP20060517902T	20040707
US2006166343 AA	20060727	US20040562512	20040707
US2009221052 AA	20090903	US20080148955	20080424
US7371560 BB	20080513	US20040562512	20040707
WO05003024 A1	20050113	WO2004AU00913	20040707

Priority:

AU20030903453 20030707 AU20040253603 20040707 US20040562512 20040707
WO2004AU00913 20040707 US20060562512 20060316 US20080148955 20080424

Probable Assignee: OF QUEENSLAND UNIV**Assignee(s):** (std): HANKAMER BEN ; KRUSE OLAF ; UNIV QUEENSLAND ; UNIVERSITY OF QUEENSLAND ; UNIV QUEENSLAND ST LUCIA**Assignee(s):** UNIV ; OF QUEENSLAND UNIV ; QUEENSLAND UNIV ; THE UNIVERSITY OF QUEENSLAND ; THE UNIVERSITY OF QUEENSLAND ST LUCIA**Inventor(s):** (std): BEN HANKAMER ; HANKAMER BEN ; KRUSE OLAF ; OLAF KRUSE**Agent(s):** GRIFFITH HACK ; MARTIN DAVID JOHN ; MOORE AND VAN ALLEN PLLC ; SKORD JENNIFER L ; JENNIFER L**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 KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**100) Family number: 51326934 (US2014250931A)**

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Title: SEASONAL THERMAL ENERGY STORAGE SYSTEM

Abstract: A seasonal thermal energy storage system for heat supply and removal, including an energy-storage device, a solar collector, a refrigerating unit, and a water supply device in closed-loop connection to a user terminal. The energy-storage device includes at least a heat source storage pond and a cold source storage pond. The heat source storage pond and the cold source storage pond are connected to water source via first water pumps. The water supply device includes a hot water supply pool connected to the heat source storage pond and a cold water supply pool connected to the cold source storage pond. The solar collector is connected to the heat source storage pond and the hot water supply pool via second water pumps. The refrigerating unit is connected to the hot water supply pool and the cold water supply pool via third water pumps.

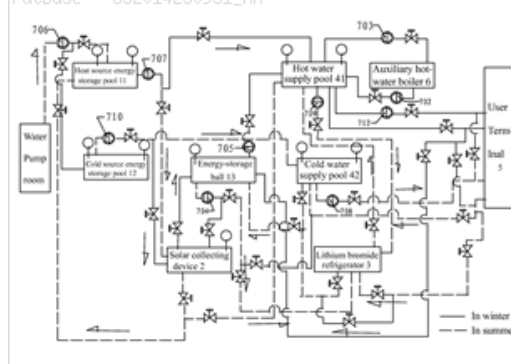
Classifications:

International (IPC 8-9): F24D11/00 F24F11/02 F24F5/00 F24J2/34
F25B13/00 F25B27/00 F25B27/02 F25B29/00 F25B30/00 F25B49/00
F28D20/00 F28D20/02 F28F23/02 (Advanced/Invention);
F24F5/00 F25B15/06 F25B30/04 (Advanced/Non-invention)

CPC: F25B27/007 F24D11/003 F24F5/0017 F24F2005/0025 F25B15/06
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Y02A30/272 Y02A30/277 F24S60/30

US: 126/617 62/235.1 62/238.3 62/438

PatBase - US2014250931_AA

**Family:**

Publication number	Publication date	Application number	Application date
AU2012343074 AA	20130530	AU20120343074	20121029
AU2012343074 BB	20170601	AU20120343074	20121029
CA2856771 AA	20140523	CA20122856771	20121029
CN102494437 A	20120613	CN201110381778	20111125
CN102494437 B	20140115	CN201110381778	20111125
EP2784412 A1	20141001	EP20120851272	20121029
EP2784412 A4	20150722	EP20120851272	20121029
EP2784412 B1	20190320	EP20120851272	20121029
IN00996MN2014 A	20150424	IN2014MN00996	20140523
JP2015504506 T2	20150212	JP20140542691T	20121029
JP6078077 B2	20170208	JP20140542691T	20121029
KR101613255 B1	20160418	KR20147014122	20121029
KR20140094577 A	20140730	KR20147014122	20121029
US2014250931 AA	20140911	US20140285666	20140523
US9631846 BB	20170425	US20140285666	20140523
WO13075572 A1	20130530	WO2012CN083696	20121029

Priority:

CN201110381778 20111125 WO2012CN083696 20121029 WO2012CN83696 20121029

Probable Assignee: SUNSHINE KAI DI NEW ENERGY GROUP CO LTD**Assignee(s):** (std): SUNSHINE KAI DI NEW ENERGY GROUP CO LTD ; WUHAN KAI DI HOLDING INVESTEMENT CO LTD**Assignee(s):** SUNSHINE KAI DI NEW ENERGY GROUP CO LTD1 JIANGXIA AVENUEKAI DI BUILDINGEASTLAKE NEWTECH DEVELOPMENT ZONEHUBEI 430223WUHANCN ; WUHAN KAI DI HOLDING INVESTEMENT CO ; CHEN YILONG ; HU SHUCHUAN ; SUNSHINE KAI DI NEW ENERGY GROUP CO**Inventor(s):** (std): CHEN YILONG ; HU SHUCHUAN ; YILONG CHEN ; SHUCHUAN HU**Inventor(s):** CHEN YILONGCN ; HU SHUCHUANCN**Agent(s):** SHELSTON IP ; SHELSTON IP PTY LTD ; H AND M PATENT AND TRADEMARK AGENTS ; ZEUNER SUMMERER STUETZ ; MATTHIAS SCHOLL PC ; MATTHIAS ; HUBEI WUHAN YONGJIA PATENT AGENCY COMPANY**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN

101) Family number: 54084936 (US8465628B)

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Title: FLOATING SOLAR ENERGY CONVERSION AND WATER DISTILLATION APPARATUS

Abstract: A solar energy conversion and distillation apparatus floats on a body of saltwater and includes a matrix of buoyant distillation modules that produce and collect distilled water for on-shore usage. The distillation modules and other buoyant structures are mutually joined within a peripheral seawall to form an atmospheric barrier, and each distillation module includes a submerged energy absorber layer to form an energy conversion chamber that confines a shallow volume of solar-heated seawater. Water vapor in the air above the confined water condenses on chilled heat exchanger conduits, and the energy absorber layer is water permeable so that confined water lost to evaporation and condensation is replenished with water from a thermal reservoir underlying the energy conversion chamber. Buoyant mistifier units in each distillation module enhance the evaporative surface area of the water vapor subject to condensation.

Classifications:

International (IPC 8-9): B01D1/16 B01D3/02

C02F1/14 (Advanced/Invention)

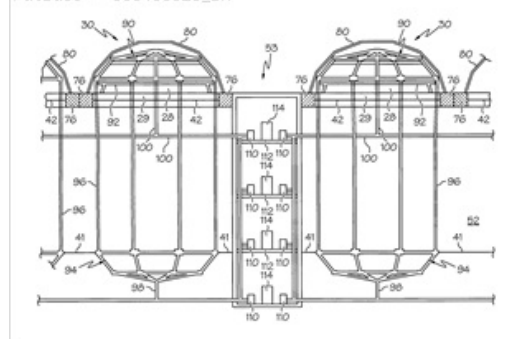
CPC: B01D1/16 C02F1/14 B01D1/0035 B01D5/0018 B01D5/006

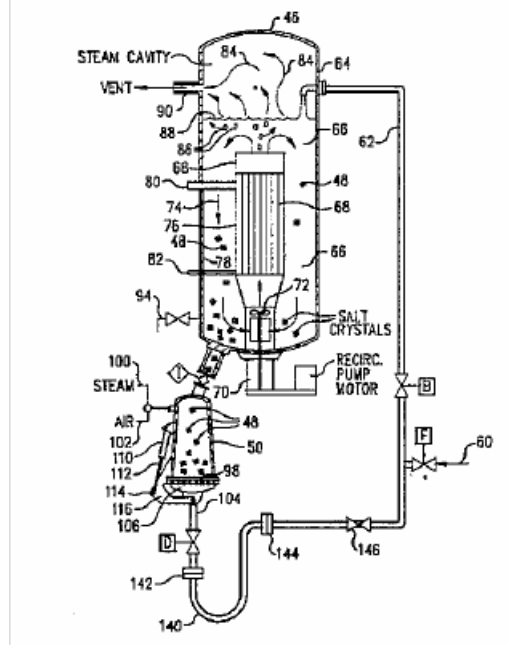
C02F2103/08 C02F2201/008 Y02E10/47 Y02A20/128 Y02A20/212

F24S20/70

US: 159/4.2 159/46 159/48.1 159/904 202/176 202/234 202/236 203/10
203/100 203/22 203/27 203/90 203/DIG.1

PatBase - US8465628_BA



**Family:**

Publication number	Publication date	Application number	Application date
US5472622 A	19951205	US19930051035	19930420
US5575923 A	19961119	US19950485347	19950607
US5656161 A	19970812	US19950473093	19950607

Priority:

US19930051035 19930420 US19950473093 19950607 US19950485347 19950607

Probable Assignee: IONICS INC

Assignee(s): (std): IONICS

Assignee(s): IONICS INC ; RESOURCES CONSERVATION CO ; UBS AG ; UBS STAMFORD BRANCH COLLATERAL AGENT AG AS

Inventor(s): (std): STANDIFORD FERRIS C ; SOLOMON ROBERT L ; PETERSON DAN ; JONES GEORGE R ; BOSTJANCIC JOSEPH

103) Family number: 52181961 (US2012270304A)

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Title: PHOTO-BIOREACTOR SYSTEM AND METHOD

Abstract: Systems and methods for cultivating photoautotrophic microorganisms are described. The systems and methods include a photo-bioreactor system and method for growing and harvesting algae in a mass production environment.

Classifications:

International (IPC 8-9): C12M1/00 C12M1/34 C12M1/36 C12M1/42 C12M3/00 C12N1/12 F21V21/00 F21V7/00 (Advanced/Invention)

CPC: C12M21/02 C12M27/20 C12M31/10 C12M41/00 C12M41/10 C12M41/26 C12M41/32 C12M41/36 C12M43/02

European: C12M21/02 C12M27/20 C12M31/10 C12M41/00 C12M41/10 C12M41/26 C12M41/32 C12M41/36 C12M43/02

US: 362/235 362/249.02 435/257.1 435/286.1 435/286.5 435/286.6 435/292.1

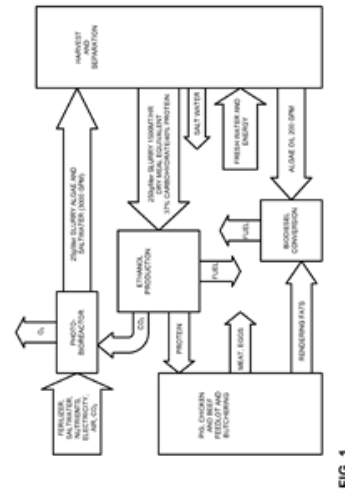


FIG. 1

Family:

Publication number	Publication date	Application number	Application date
US2012270304 AA	20121025	US20120452442	20120420
US9587211 BB	20170307	US20120452442	20120420

Priority:

US20110477487P 20110420 US20120452442 20120420

Probable Assignee: ARIZONA TECHNOLOGY INNOVATION GROUP INC**Assignee(s):** (std): ARIZONA TECH INNOVATION GROUP INC ; ARIZONA TECHNOLOGY INNOVATION GROUP L L C ; FINK STEVEN T ; JOHNSON WAYNE L**Assignee(s):** ARIZONA TECHNOLOGY INNOVATION GROUP LLC ; ARIZONA TECHNOLOGY INNOVATION GROUP INC**Inventor(s):** (std): JOHNSON WAYNE L ; FINK STEVEN T**Agent(s):** MICHAEL K; JENNINGS STROUSS AND SALMON PLC**104) Family number: 55321970 (US2013327711A)**

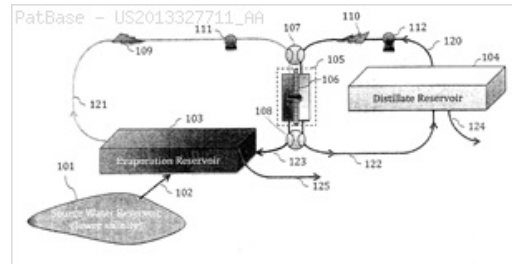
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Title: METHODS FOR SUSTAINABLE MEMBRANE DISTILLATION CONCENTRATION OF HYPER SALINE STREAMS

Abstract: A novel method of producing concentrated streams or otherwise useful hypersaline brines from a source of non-potable or otherwise impaired water is provided. The method comprises feeding the source water into the feed side of a membrane distillation unit while simultaneously feeding a distillate stream through the receiving side of the distillation unit. The feed and receiving sides are separated by a hydrophobic, microporous membrane that allows water vapor to flux through the membrane to the receiving side. As the membrane becomes clogged with particulates, the unit can be subjected to stream flow reversal and/or temperature gradient reversal in order to remove those particulates and restore previous vapor flux levels, after which previous operations can be resumed.

Classifications:

International (IPC 8-9): B01D1/00 B01D3/00 B01D3/22 B01D9/00 B01L1/00 C02F C02F1/04 C02F1/08 C02F1/44 (Advanced/Invention); B01D B01L C02F (Subclass/Invention)
CPC: C02F1/447 B01D61/364 C02F2103/001 C02F2103/08 B01D2311/103 B01D2311/106 Y02W10/37 C02F2303/16 C02F2303/22 C02F2101/10 C02F2301/063 Y02A20/128
US: 210/636 210/640

**Family:**

Publication number	Publication date	Application number	Application date
AU2013274344 AA	20131219	AU20130274344	20130611
AU2013274344 BB	20180125	AU20130274344	20130611
CL2014003369 A1	20150807	CL20140003369	20141211
CL56406 B	20180808	CL20140003369	20141211
IL236212 A0	20150129	IL20130236212	20130611
IL236212 A1	20161130	IL20130236212	20130611
US2013327711 AA	20131212	US20130915465	20130611
US2016280565 AA	20160929	US20160084202	20160329
WO13188450 A1	20131219	WO2013US45247	20130611

Priority:

US20120658244P 20120611 US20130915465 20130611 WO2013US45247 20130611
 US20160084202 20160329

Probable Assignee: COMPASS MINERALS OGDEN INC**Assignee(s):** (std): COLORADO SCHOOL OF MINES ; COMPASS MINERALS OGDEN INC ; COMPASS MINERALS OGDEN INC ; GREAT SALT LAKE MINERALS ; GREAT SALT LAKES MINERALS CORP**Assignee(s):** GREAT SALT LAKE MINERALS CORP**Inventor(s):** (std): MILNE COREY R ; POE JERRY ; PANNELL DANIEL K ; HICKENBOTTOM KERRI L ; CATH TZAH**Agent(s):** PHILLIPS ORMONDE FITZPATRICK; IP GATEWAY PATENT AND TRADE MARK ATTORNEYS PTY LTD; JOHANSSON AND LANGLOIS LTDA; BEUCHAT BARROS AND PFENNIGER; EITAN MEHULAL AND SADOT; BORNMAN TRACY L**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**105) Family number: 53283989 (IN02537CH2010A)**

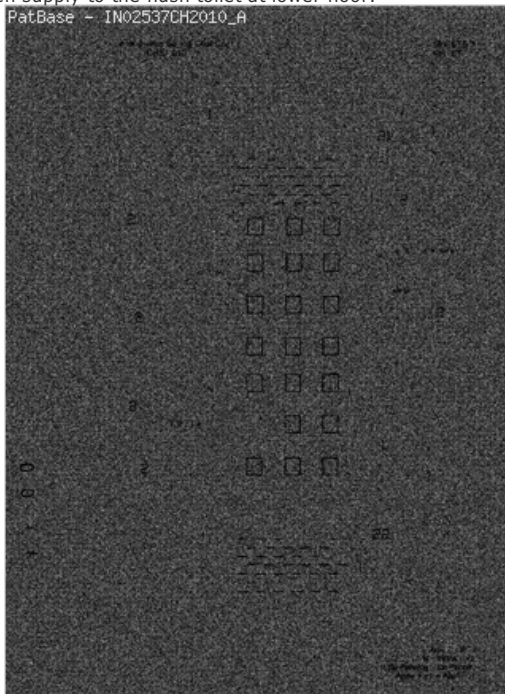
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Title: RE-EXCHANGE ENERGY-SAVING BUILDING SYSTEM

Abstract: A re-exchange energy-saving building system in which building power supply system allows to supply water from top floor pond to the capillary generator set; the electric energy generated by capillary generator set is supplied to the user load, and the electric energy generated by solar PV is supplied to the water pump to transfer water from the basement pond to the top floor pond; the valley load in the utility power grid is supplied to the water pump to transfer water from the basement pond to the top floor pond. A parallel connection of solar water heaters, the hot water supply system for the building can provide hot water to the building at any time. The air conditioners for the building enable heating and cooling via GSHP. The water-saving system permits a membrane filter tank to filter the bath water and domestic water and then supply to the flush toilet at lower floor.

Classifications:**International (IPC 8-9):** F24F (Advanced/Invention)

PatBase - IN02537CH2010_A

**Family:**

Publication number	Publication date	Application number	Application date
IN02537CH2010 A	20130322	IN2010CH02537	20100831

Probable Assignee: ZHEJIANG JIEER SAVING COAL CO LTD**Assignee(s):** ZHEJIANG JIEER SAVING COAL CO LTD**Inventor(s):** FAN PINLIANG**106) Family number: 50793990 (US2012070232A)**

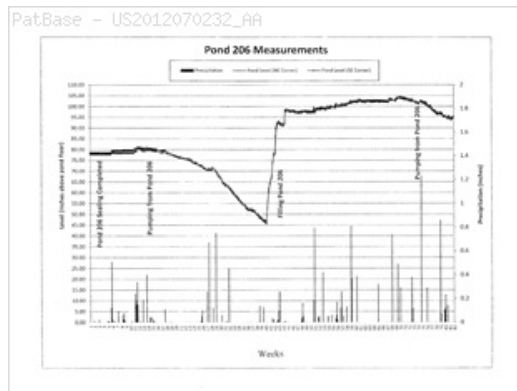
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Title: INSTALLATION OF LEAKAGE BARRIERS TO ENHANCE YIELD OF MINERAL DEPOSITS IN UNLINED SOLAR POND SYSTEMS

Abstract: Slurry walls and methods of using those slurry walls to seal unlined solar ponds are provided. The slurry walls are formed from a mixture comprising clay and cement in water. A trench is keyed into the dike surrounding the solar pond, down to a geotechnically predetermined level. The slurry is deposited into the trench and allowed to harden, after which it is covered with a membrane or other covering. The inventive slurry walls reduce, and preferably prevent, leakage of water from the solar pond.

Classifications:

International (IPC 8-9): C04B C04B14/00 C04B14/10 C04B18/14 C04B28/04 C04B28/08 E02B7/02 (Advanced/Invention); C04B (Subclass/Invention)
International (IPC 1-7): C04B14/10 C04B18/14 C04B28/04
CPC: E02B7/02 C04B28/02 C04B28/08
European: C04B28/02 C04B28/08
US: 106/718 106/718S 106/790 106/790S 106/811 106/811S 405/116 405/116P



Family:

Publication number	Publication date	Application number	Application date
AU2011305344 AA	20120329	AU20110305344	20110922
BR112013008162 A2	20171205	BR20131108162	20110922
CA2812188 AA	20130315	CA20112812188	20110922
CL2013000772 A1	20131004	CL20130000772	20130321
CN103221359 A	20130724	CN201180055821	20110922
IL225417 A0	20130627	IL20110225417	20110922
IN02185CN2013 A	20141003	IN2013CN02185	20130319
MX2013003058 A1	20131017	MX20130003058	20110922
PE13532013 A1	20131208	PE20130000627	20110922
US2012070232 AA	20120322	US20110240597	20110922
US2013279987 AA	20131024	US20130922755	20130620
WO12040470 A2	20120329	WO2011US52769	20110922
WO12040470 A3	20120809	WO2011US52769	20110922

Priority:

US20100385449P 20100922 US20110240597 20110922 WO2011US52769 20110922
US20130922755 20130620

Probable Assignee: GREAT SALT LAKE MINERALS CORP

Assignee(s): (std): GREAT SALT LAKE MINERALS ; BURTON THOMAS S ; DAY STEVEN R ; REYNOLDS MARK ; MILNE COREY R
Assignee(s): JPMORGAN CHASE BANK NA TORONTO BRANCH CANADIAN COLLATERAL AGENT AS ; GEO SOLUTIONS INC ; GREAT SALT LAKE MINERALS CORP ; JPMORGAN CHASE BANK NA COLLATERAL AGENT AS ; JPMORGAN CHASE BANK NA TORONTO BRANCH CANADIAN COL

Inventor(s): (std): DAY STEVEN R ; BURTON THOMAS S ; REYNOLDS MARK ; MILNE COREY R ; STEVEN R DAY ; COREY R MILNE ; MARK REYNOLDS ; THOMAS S BURTON

Inventor(s): STEVEN RDAY

Agent(s): PHILLIPS ORMONDE FITZPATRICK; GOWLING LAFLEUR HENDERSON LLP; JOHANSSON AND LANGLOIS LTDA; BORNMAN TRACY L

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

107) Family number: 41476995 (WO08017118A1)

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Title: AIR SUPPORTED COVER

Abstract: An air supported cover (10) is described formed from a central panel (14) and peripheral weight pipe arrangement. The weight pipe arrangement is formed from one or more weight pipes 12. The weight of the weight pipe arrangement may be varied by addition of more weight pipes or introduction of material into one or more internal cavities of the weight pipe or pipes. The central panel 12 may have a peripheral sleeve 22 to receive the weight pipes. The cover may include a side curtain (94) and internal purge vent or vents (140). Adjacent covers may be joined by a joining strip (115). The cover is particularly suitable for use on water.

Classifications:

International (IPC 8-9): A01K63/00 E04H4/06 (Advanced/Invention);

A01K63/00 E04H4/00 (Core/Invention)

CPC: E04H4/105 A01K63/00

European: A01K63/00 E04H4/10C

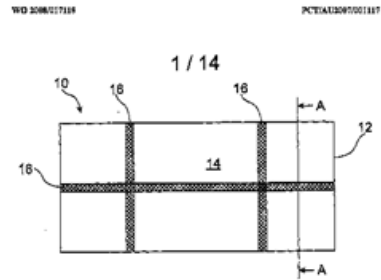


FIG. 1

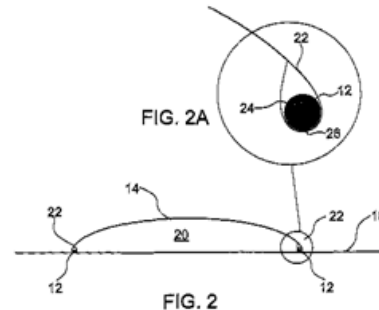


FIG. 2

Family:

Publication number	Publication date	Application number	Application date
AU2007283455 AA	20080214	AU20070283455	20070809
WO08017118 A1	20080214	WO2007AU01117	20070809

Priority:

AU20060904315 20060809 AU20070283455 20070809 WO2007AU01117 20070809

Probable Assignee: STATE QUEENSLAND PRIMARY IND

Assignee(s): (std): STATE QUEENSLAND PRIMARY IND ; THORPE GARY KEITH

Assignee(s): THE STATE OF QUEENSLAND THROUGH ITS DEPARTMENT OF PRIMARY INDUSTRIES AND FISHERIES ; STATE OF QUEENSLAND THROUGH ITS DEPARTMENT OF PRIMARY IND AND FISHERIES ; STATE OF QUEENSLAND THROUGH ITS DEPARTMENT OF PRIMARY IND AND FISHERIES

Inventor(s): (std): THORPE GARY KEITH

Inventor(s): GARY KEITH THORPE

Agent(s): FISHER ADAMS KELLY; FISHER ADAMS KELLY PTY LTD; FISHER ADAMS KELLY CALLINANS; SPRUSON AND FERGUSON

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