

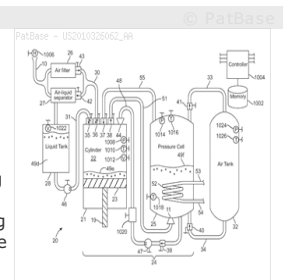
1) Family number: 47930612 (US2010326062A)

COMPRESSED AIR ENERGY STORAGE SYSTEM UTILIZING TWO-PHASE FLOW TO FACILITATE HEAT EXCHANGE

Abstract: Source: US2010326062A A compressed-air energy storage system according to embodiments of the present invention comprises a reversible mechanism to compress and expand air, one or more compressed air storage tanks, a control system, one or more heat exchangers, and, in certain embodiments of the invention, a motor-generator. The reversible air compressor-expander uses mechanical power to compress air (when it is acting as a compressor) and converts the energy stored in compressed air to mechanical power (when it is acting as an expander). In certain embodiments, the compressor-expander comprises one or more stages, each stage consisting of pressure vessel (the "pressure cell") partially filled with water or other liquid. In some embodiments, the pressure vessel communicates with one or more cylinder devices to exchange air and liquid with the cylinder chamber(s) thereof. Suitable valving allows air to enter and leave the pressure cell and cylinder device, if present, under electronic control.

Probable Assignee: LIGHTSAIL ENERGY INC

Earliest Publication Date: 20101230



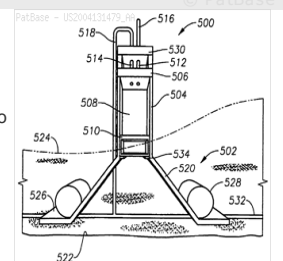
2) Family number: 30498178 (US2004131479A)

BUOYANCY PUMP POWER SYSTEM

Abstract: Source: US2004131479A A system and method generating electricity includes converting wave motion into mechanical power. A fluid matter is driven as a function of the mechanical power to a reservoir. The fluid matter is flowed from the reservoir. At least a portion of a kinetic energy of the flowing fluid matter is converted into electrical energy. The fluid matter may be liquid or gas.

Probable Assignee: INDEPENDENT NATURAL RESOURCES INC

Earliest Publication Date: 20040422



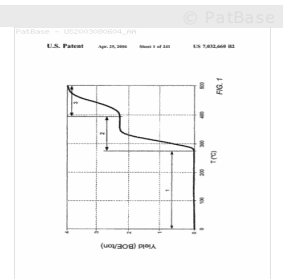
3) Family number: 40830573 (US2003080604A)

IN SITU THERMAL PROCESSING AND INHIBITING MIGRATION OF FLUIDS INTO OR OUT OF AN IN SITU OIL SHALE FORMATION

Abstract: Source: US2003080604A An oil shale formation may be treated using an in situ thermal process. Fluid migration into and/or out of a treatments area in the formation may be inhibited. In some embodiments, a barrier may be used to inhibit migration of fluids into and/or out of the treatment area. Heat may be provided to the treatment area and subsequently, hydrocarbons, H₂, and/or other formation fluids may be produced from the formation.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20021031



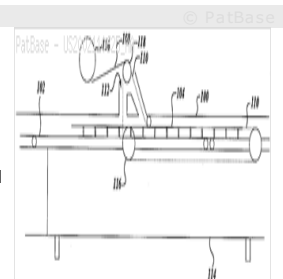
4) Family number: 29750624 (US2002110625A)

CONTINUOUS PACKAGING IN ENCLOSED CONDUITS

Abstract: Source: US2002110625A The invention relates to a package having a first web defining a cavity and a second web bonded to the first web, wherein the second web includes microperforations at a location that is specific to minimize the escape of liquids from the cavity to the exterior of the package. In one particular embodiment, the first web defines a four sided cavity with walls and corresponding flaps attached to the walls that can be folded and bonded to the cavity walls. The second web is an overwrapping lidding web, wherein microperforations are provided on the web material so that the microperforations are aligned with a flap recess, which in turn is in communication with the interior of the tray cavity. In this manner, suitable gas exchange can occur with minimal to no escape of liquids from the tray cavity.

Probable Assignee: SAFEFRESH TECHNOLOGIES LLC

Earliest Publication Date: 20010503



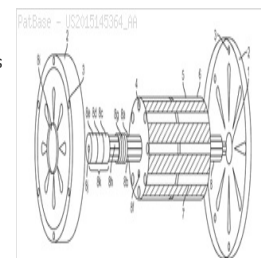
5) Family number: 54123935 (US2015145364A)

HIGH EFFICIENCY AC DC ELECTRIC MOTOR, ELECTRIC POWER GENERATING SYSTEM WITH VARIABLE SPEED, VARIABLE POWER, GEOMETRIC ISOLATION AND HIGH EFFICIENCY CONDUCTING ELEMENTS

Abstract: Source: US2015145364A A method and apparatus for reducing electromagnetic drag in an electric machine may include a laminated stator having wire slots disposed around the inner periphery spaced into sectors separated by a pole iron support structure. The slots contain induction windings. A series of wound lateral pole irons may be arranged around the inner periphery of the stator, the first ends of which extend into the slots in the sectors. A support structure supports the lateral pole irons by forming a circular opening concentric with the inner periphery of the stator. A rotor may be inserted into the circular opening of the lateral pole iron support structure and supported at the stator lateral pole iron ends by a support means. A plurality of rotor inserts may contain free-wheeling permanent magnet inserts spaced along an outer periphery of the rotor. The rotor may be inserted into the circular opening of the lateral pole iron support structure and the free-wheeling permanent magnet inserts may be inserted into cavities along the outer periphery of the rotor.

Probable Assignee: REDEPTIVE TECHNOLOGIES LTD

Earliest Publication Date: 20130620



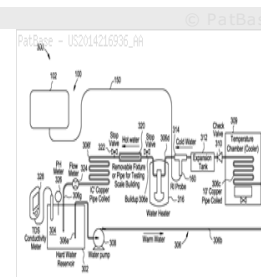
6) Family number: 57136270 (US2014216936A)

DEVICES, SYSTEMS AND METHODS FOR TREATMENT OF WATER WITH ELECTROMAGNETIC FIELDS

Abstract: Source: US2014216936A Electromagnetic water treatment devices for applying electromagnetic fields to liquids, such as water are disclosed. The water treatment devices may include a water-immersible probe configured to generate electromagnetic output fields effective to remove scale, prevent the growth of scale and/or eliminate microbes in a water supply system. Systems and methods for treating water using the disclosed devices are also provided.

Probable Assignee: REVERSE IONIZER SYSTEMS LLC

Earliest Publication Date: 20140807



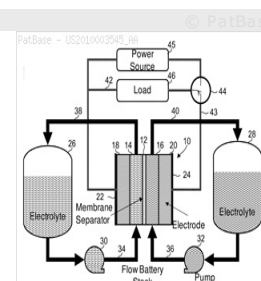
7) Family number: 44210832 (US2010003545A)

REDOX FLOW BATTERY SYSTEM FOR DISTRIBUTED ENERGY STORAGE

Abstract: Source: US2010003545A A large stack redox flow battery system provides a solution to the energy storage challenge of many types of renewable energy systems. Independent reaction cells arranged in a cascade configuration are configured according to state of charge conditions expected in each cell. The large stack redox flow battery system can support multi-megawatt implementations suitable for use with power grid applications. Thermal integration with energy generating systems, such as fuel cell, wind and solar systems, further maximize total energy efficiency. The redox flow battery system can also be scaled down to smaller applications, such as a gravity feed system suitable for small and remote site applications.

Probable Assignee: ENERVAULT CORP

Earliest Publication Date: 20100107



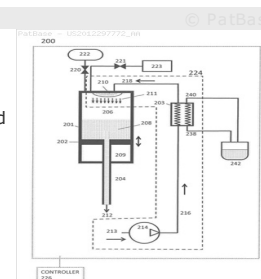
8) Family number: 52405802 (US2012297772A)

SYSTEMS AND METHODS FOR EFFICIENT TWO-PHASE HEAT TRANSFER IN COMPRESSED-AIR ENERGY STORAGE SYSTEMS

Abstract: Source: US2012297772A In various embodiments, foam is compressed to store energy and/or expanded to recover energy.

Probable Assignee: SUSTAINX INC

Earliest Publication Date: 20121122



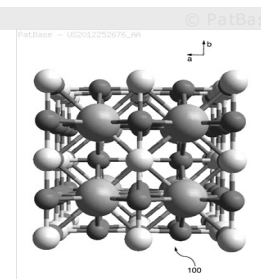
9) Family number: 52068782 (US2012252676A)

EXTREMELY LOW RESISTANCE COMPOSITIONS AND METHODS FOR CREATING SAME

Abstract: Source: US2012252676A The invention pertains to creating new extremely low resistance (ELR) materials, which may include high temperature superconducting (HTS) materials. In some implementations of the invention, an ELR material may be modified by depositing a layer of modifying material onto the ELR material to form a modified ELR material. The modified ELR material has improved operational characteristics over the ELR material alone. Such operational characteristics may include operating at increased temperatures or carrying additional electrical charge or other operational characteristics. In some implementations of the invention, the ELR material is a cuprate-perovskite, such as, but not limited to BSSCO. In some implementations of the invention, the modifying material is a conductive material that bonds easily to oxygen, such as, but not limited to, chromium.

Probable Assignee: AMBATURE INC

Earliest Publication Date: 20121004



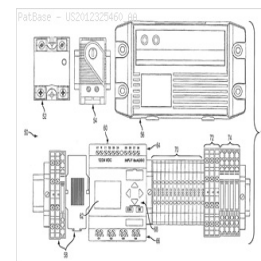
10) Family number: 50264112 (US2012325460A)

WELL WATCHMAN PUMPING AND CONTROL SYSTEM

Abstract: Source: US2012325460A A well watchman pumping and control system capable of operating in a wide range of ambient conditions is described. The system automatically maintains water level in a water storage vessel, while protecting the pump and generator from operating in conditions outside preset operating parameters to prevent premature failure and reduce repair. By operating to pump water only when preset operating conditions exist, e.g. low water level, ambient temperature, etc., the system reduces labor, fuel, and maintenance operating costs to the owner, improves well pumping reliability and production, reduces generator fuel consumption, reduces emissions, and conserves ground water.

Probable Assignee: MIKE LISK

Earliest Publication Date: 20111229



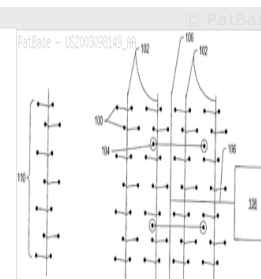
11) Family number: 24116849 (US2003098149A)

IN SITU THERMAL RECOVERY FROM A RELATIVELY PERMEABLE FORMATION USING GAS TO INCREASE MOBILITY

Abstract: Source: US2003098149A A method for treating a relatively permeable formation containing heavy hydrocarbons in situ may include providing heat from one or more heat sources to a portion of the formation. The heat may be allowed to transfer from the heat sources to a selected section of the formation. The transferred heat may reduce the viscosity of at least some hydrocarbons within the selected section. A gas may be produced to the selected section of the formation. The gas may produce a flow of hydrocarbons within the selected section. A mixture of hydrocarbons may be produced from the selected section.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20021031



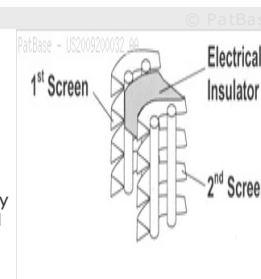
12) Family number: 43168920 (US2009200032A)

SYSTEM, METHOD AND APPARATUS FOR CREATING AN ELECTRICAL GLOW DISCHARGE

Abstract: Source: US2009200032A The present invention provides system, method and apparatus for creating an electric glow discharge that includes a first and second electrically conductive screens having substantially equidistant a gap between them, one or more insulators attached to the electrically conductive screens, and a non-conductive granular material disposed within the gap. The electric glow discharge is created whenever: (a) the first electrically conductive screen is connected to an electrical power source such that it is a cathode, the second electrically conductive screen is connected to the electrical power supply such that it is an anode, and the electrically conductive fluid is introduced into the gap, or (b) both electrically conductive screens are connected to the electrical power supply such they are the cathode, and the electrically conductive fluid is introduced between both electrically conductive screens and an external anode connected to the electrical power supply.

Probable Assignee: FORET PLASMA LABS LLC

Earliest Publication Date: 20090423



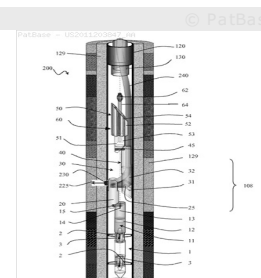
13) Family number: 49418140 (US2011203847A)

DOWNHOLE HYDRAULIC JETTING ASSEMBLY, AND METHOD FOR STIMULATING A PRODUCTION WELLBORE

Abstract: Source: US2011203847A A method for forming multiple lateral boreholes from an existing wellbore is provided. The wellbore has been completed with a string of production casing. The wellbore may have a slimhole region having an inner diameter that is less than the inner diameter of the production casing. The method generally comprises providing a downhole apparatus having a whipstock. The whipstock may be a single piece tool that rotates into position below the slimhole region, or it may be a two piece tool comprising a top whipstock member and a separate bottom whipstock member. The whipstock has a curved face. The method also includes running the apparatus down into the parent wellbore. A force is applied to the apparatus to cause the whipstock to rotate within the wellbore into an operating position. In this position, the curved face of the whipstock forms a bend-radius that allows the jetting hose to bend across the entire inner diameter of the production casing. A jetting hose is run into the wellbore. Upon contact with the curved face of the whipstock, the jetting hose is re-directed through a window in the production casing. Hydraulic fluid is injected under pressure through the hose to provide hydraulic jetting. The hose is directed through the window and into the formation to create a lateral borehole extending many feet outwardly into a subsurface formation. A downhole jetting assembly for forming multiple lateral boreholes from a parent wellbore is also provided herein. The assembly utilizes substantially the entire inner diameter of the casing as the bend radius for a hydraulic jetting hose, thus providing for the maximum hydraulic horsepower at the jetting nozzle.

Probable Assignee: COILED TUBING SPECIALTIES LLC

Earliest Publication Date: 20110825



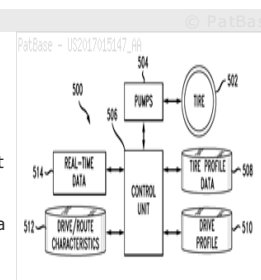
14) Family number: 64694686 (US2017015147A)

SYSTEM AND METHOD FOR MAINTAINING TARGET PRESSURE IN CONJUNCTION WITH GRAVITY-DRIVEN AUTOMATIC TIRE PUMPING MECHANISMS

Abstract: Source: US2017015147A Disclosed herein are systems, methods, and computer-readable storage media for gravity-driven pumps, gravity-driven power generators that power electric pumps, as well as various supporting concepts, mechanisms, and approaches. As a tire rotates around an axle, the pull of gravity varies for a given point on the tire. While gravity is always pulling 'down', the force relative to a fixed point on the tire changes. Gravity-driven pumps exploit these changes in gravitational force to do work. Automatic, gravity-driven pumps can be used to inflate tires to offset the natural gas leakage of modern tires, and can maintain tire pressure and inflation within a desired or optimal range. As different conditions are met, pump parameters are determined which can adjust the pumps. Such conditions include driving patterns, load, and temperature, and resulting adjustments include turning on and off pumps, varying stroke length, and varying the number of strokes required.

Probable Assignee: INTELLIAIRE LLC

Earliest Publication Date: 20170119

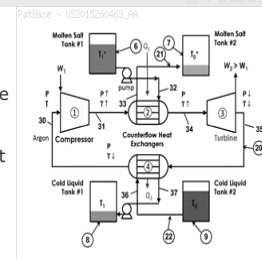


SYSTEMS AND METHODS FOR ENERGY STORAGE AND RETRIEVAL

Abstract: Source: US2015260463A The present disclosure provides pumped thermal energy storage systems that can be used to store electrical energy. A pumped thermal energy storage system of the present disclosure can store energy by operating as a heat pump or refrigerator, whereby net work input can be used to transfer heat from the cold side to the hot side. A working fluid of the system is capable of efficient heat exchange with heat storage fluids on a hot side of the system and on a cold side of the system. The system can extract energy by operating as a heat engine transferring heat from the hot side to the cold side, which can result in net work output. Systems of the present disclosure can employ solar heating for improved storage efficiency.

Probable Assignee: GOOGLE INC

Earliest Publication Date: 20140403

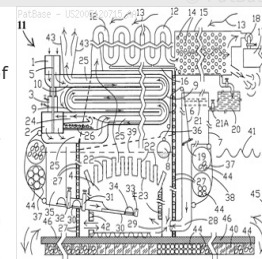


HEAT ENERGY RECAPTURE AND RECYCLE AND ITS NEW APPLICATIONS

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

Probable Assignee: CHRISTIAN SCHOOL OF TECHNOLOGY CHARITABLE FOUNDATION TRUST

Earliest Publication Date: 19880712

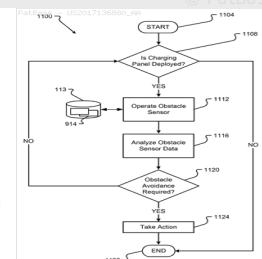


ELECTRIC VEHICLE CHARGING DEVICE OBSTACLE AVOIDANCE AND WARNING SYSTEM AND METHOD OF USE

Abstract: Source: US2017136880A Techniques for electric vehicle systems, and in particular to an electric vehicle charging device obstacle avoidance system and method of use. In one embodiment, a system for obstacle avoidance of a charging panel of an electrical vehicle is disclosed, the system comprising: a charging panel interconnected to the electric vehicle; an actuator interconnected to the charging panel, the actuator configured to position the charging panel; at least one sensor configured to sense an obstacle location measurement in a predicted travel path of the electric vehicle; and an obstacle avoidance controller that receives the obstacle location measurement and determines if an obstacle avoidance action is recommended.

Probable Assignee: NIO USA INC

Earliest Publication Date: 20170518

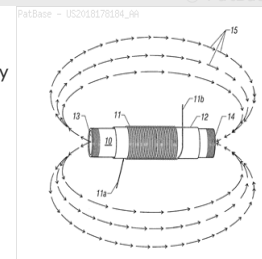


METHOD AND APPARATUS FOR CONDITIONING FLUIDS

Abstract: Source: US2018178184A An apparatus, comprising a magnetically conductive conduit having a fluid entry port, a fluid impervious boundary wall and a fluid discharge port defining a fluid impervious flow path through the magnetically conductive conduit, at least one end of the conduit having a taper forming a planar surface extending from an outer to an inner surface; an electrical conductor comprising a length of an electrical conducting material having a first and second conductor lead, the electrical conductor coiled with at least one turn to form an uninterrupted coil of electrical conductor encircling a section of the outer surface of the magnetically conductive conduit; and an electrical power supply operably connected to at least one of the first and second conductor leads, wherein the at least one coiled electrical conductor is thereby energized to provide a magnetic field having lines of flux directed along a longitudinal axis of the magnetically conductive conduit.

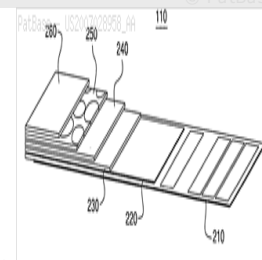
Probable Assignee: WILSA HOLDING LLC

Earliest Publication Date: 20161103



MULTIPLE LAYER SOLAR ENERGY HARVESTING COMPOSITION AND METHOD, SOLAR ENERGY HARVESTING BUCKYBALL, INDUCTIVE COUPLING DEVICE; VEHICLE CHASSIS; ATMOSPHERIC INTAKE HYDROGEN MOTOR; ELECTRICAL ENERGY GENERATING TIRE; AND MECHANICAL ENERGY HARVESTING DEVICE

Abstract: Source: US2007028958A Provided is a multiple layer composition and method for deposition of a solar energy harvesting strip onto a driving surface that will allow electric cars to charge by an inductive coupling. The multiple layer composition includes at least one magnetic material for generating a magnetic field, wherein at least one of the multiple layers comprises the magnetic material. Further, the multiple layer composition includes at least one solar energy harvesting material for converting at least one of thermal and photonic energy into electrical energy, wherein at least one of the multiple layers comprises the at least one solar energy harvesting material and wherein the at least one solar energy harvesting material is located within a magnetic field generated by the at least one magnetic material. An alternative multiple layer composition includes a thermal energy harvesting material for converting thermal energy into electrical energy, wherein at least one layer comprises the thermal energy harvesting material, and a photonic energy harvesting material for converting photonic energy into electrical energy, wherein at least one layer comprises the thermal energy harvesting material. Additionally provided is a solar energy harvesting buckyball, inductive coupling device, vehicle chassis for storing electrical energy, atmospheric intake hydrogen motor, electrical energy generating tire and mechanical energy harvesting device.



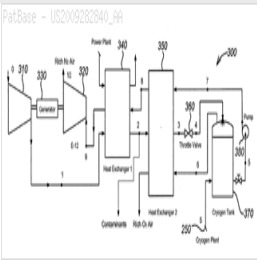
Probable Assignee: KAHRL RETTI
Earliest Publication Date: 20070208

20) Family number: 32884395 (US2009282840A)

ENERGY STORAGE AND GENERATION

Abstract: Source: US2009282840A The present invention concerns systems for storing energy and using the stored energy to generate electrical energy or drive a propeller (505). In particular, the present invention provides a method of storing energy comprising: providing a gaseous input, producing a cryogen from the gaseous input; storing the cryogen; expanding the cryogen; using the expanded cryogen to drive a turbine (320) and recovering cold energy from the expansion of the cryogen. The present invention also provides a cryogenic energy storage system comprising: a source of cryogen; a cryogen storage facility (370); means for expanding the cryogen; a turbine (320) capable of being driven by the expanding cryogen; and means (340, 350) for recovering cold energy released during expansion of the cryogen.

Probable Assignee: HIGHVIEW ENTERPRISES LTD
Earliest Publication Date: 20070830

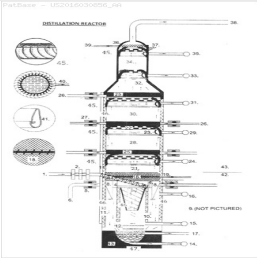


21) Family number: 57414072 (US2016030856A)

DISTILLATION REACTOR MODULE

Abstract: Source: US2016030856A 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.

Probable Assignee: TRANSTAR GROUP LLC
Earliest Publication Date: 20140918

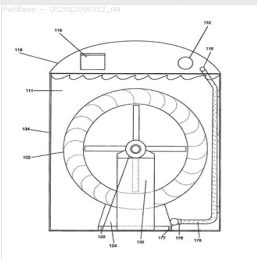


22) Family number: 48165131 (US2012090312A)

LOW-DRAG HYDRO-PNEUMATIC POWER CYLINDER AND SYSTEM

Abstract: Source: US2012090312A A hydro-pneumatic cylinder for converting buoyancy energy of compressed gas into mechanical energy. The cylinder can include a pair of end plates disposed at opposite ends of the cylinder and a drive axle extending longitudinally through the cylinder and passing through the center of each end plate. The cylinder can also include a core support coupled to each end plate and centrally disposed in the cylinder and a plurality of vanes for promoting a low-drag flow. Each of the plurality of vanes is coupled to the core support and the pair of end plates. A bucket is defined by the core support, two of the plurality of vanes, and the pair of end plates. The cylinder further includes a vane support coupled to the plurality of vanes and the core support. The vane support defines a plurality of openings formed therein through which a gas can pass for equalizing pressure in the bucket.

Probable Assignee: GRAVITAIR RIGHTS INC
Earliest Publication Date: 20110120

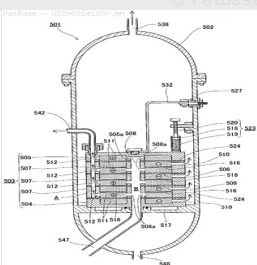


23) Family number: 28878905 (US2003141200A)

SYSTEM AND METHOD FOR GENERATING HIGH PRESSURE HYDROGEN

Abstract: Source: US2003141200A The invention provides a system and a method for generating high pressure hydrogen that is able to efficiently and safely generate hydrogen only by electrolysis of water even by using an electric power generated by a frequently varying natural energy such as sunlight without using any compressors. The system comprises an electrolysis cell using polyelectrolyte membranes, particularly a double-polarity multi-layered type electrolysis cell having a specified structure is disposed in a vessel for storing generated hydrogen, preferably for storing cooled hydrogen under a high pressure hydrogen atmosphere. High pressure hydrogen is generated by electrolysis of pure water using the electrolysis cell by suppressing the pressure applied to the cell to a pressure below the pressure resistance of the cell using a differential pressure sensor and pressure controller.

Probable Assignee: HARADA HIROYUKI
Earliest Publication Date: 20030731

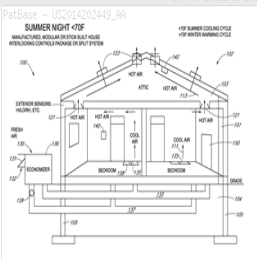


24) Family number: 50916002 (US2014202449A)

MULTIPLATFORM HEATING VENTILATION AND AIR CONDITIONING CONTROL SYSTEM

Abstract: Source: US2014202449A A multiplatform heating ventilation and air conditioning control system configured to maximize energy efficiency in maintaining desired conditions within an area through beneficial use of natural energy sources. In some embodiments, the multiplatform heating ventilation and air conditioning control system can include sensors and a control system. In some embodiments, the sensors can detect conditions inside and outside of the controlled area to determine the most efficient method of maintaining desired conditions.

Probable Assignee: POWER SYSTEMS INC GLOBAL SOLAR WATER AND
Earliest Publication Date: 20120412



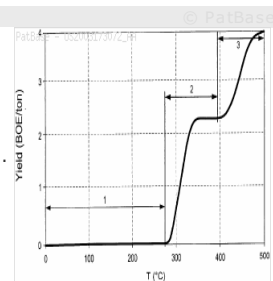
25) Family number: 66393249 (US2003173072A)

FORMING OPENINGS IN A HYDROCARBON CONTAINING FORMATION USING MAGNETIC TRACKING

Abstract: Source: US2003173072A A method for forming one or more openings in a hydrocarbon containing formation is described. The method may include forming or providing a first opening in the formation. A plurality of magnets may be provided into the first opening. The plurality of magnets may be positioned along a portion of the first opening. The plurality of magnets may produce a series of magnetic fields along the portion of the first opening. A second opening in the formation may be formed using magnetic tracking of the series of magnetic fields. The second opening may be spaced a desired distance from the first opening. Alternate embodiments include use of an energized conduit to create a magnetic field. Such energized conduit can be used alone or with the plurality of magnets.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20030918



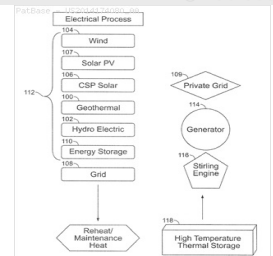
26) Family number: 56489638 (US2014174080A)

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: Source: US2014174080A 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.

Probable Assignee: FRIESTH KEVIN LEE

Earliest Publication Date: 20140522



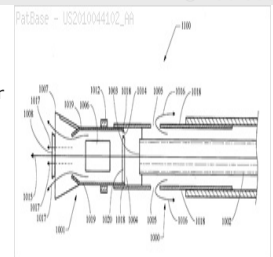
27) Family number: 44432240 (US2010044102A)

METHODS AND APPARATUS FOR REMOVAL AND CONTROL OF MATERIAL IN LASER DRILLING OF A BOREHOLE

Abstract: Source: US2010044102A There is provided a system, apparatus and methods for removal of material for the path of a laser beam during laser drilling of a borehole and for removal of displaced borehole material from the borehole during laser drilling. In particular, there are provided paths, dynamics and parameters of fluid flows, and apparatus for obtaining such, for use in conjunction with a laser bottom hole assembly.

Probable Assignee: FORO ENERGY INC

Earliest Publication Date: 20100225



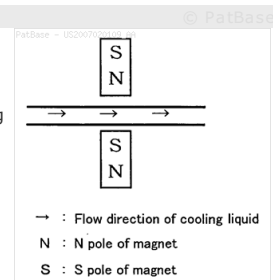
28) Family number: 31478294 (US2007020109A)

COOLING MEDIUM FLOW PASSAGE

Abstract: Source: US2007020109A The present invention provides a cooling medium flow path for improving cooling efficiency of a cooling medium used for liquid-cooling systems for motors, radiators and the like. The cooling medium flow path according to the present invention is capable of increasing cooling efficiency of a cooling medium by providing magnetic members for generating a magnetic force in a direction substantially perpendicular to the flow direction of the cooling medium so that clusters of a liquid, such as cooling water, antifreeze liquid or the like flowing through the flow path may be finely divided or activated.

Probable Assignee: KANKYOKIKI CORP

Earliest Publication Date: 20050120



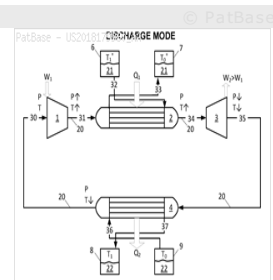
29) Family number: 70238165 (US2018179960A)

PUMP CONTROL OF CLOSED CYCLE POWER GENERATION SYSTEM

Abstract: Source: US2018179960A Disclosed are systems and methods for pump control of a closed thermodynamic cycle system, such as a Brayton cycle. Operational parameters such as working fluid temperature, thermal fluid temperature, stream pressure, and power generation may be the basis for controlling a thermal fluid pump rate.

Probable Assignee: GOOGLE INC

Earliest Publication Date: 20180628



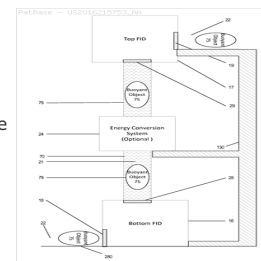
30) Family number: 62989418 (US2016215753A)

MASS LEVITATOR WITH ENERGY CONVERSION

Abstract: Source: US2016215753A The various embodiments disclosed herein provide a generalized system for extracting gravitational energy from the planet and provide for a general, pollution free, mass lifting and energy conversion system in which the laws of fluid flow, and in particular buoyancy and gravity are utilized to lift an arbitrary mass to a higher gravitational potential energy, where upon the increased potential energy can be converted to other forms of energy. Novel and non-obvious features of the fluid interface device, used to insert the buoyant object into the buoyant fluid, insure that the insertion energy is less than the potential energy gained by the object. The net increase in potential energy can be converted to other forms of energy such as electrical power or mechanical energy. It is shown in that energy gain is effectively extracted from the gravitational field of the planet without breaking the laws of conservation of energy.

Probable Assignee: WESTMORELAND DOUG

Earliest Publication Date: 20160728



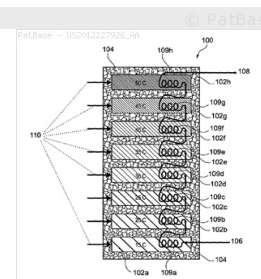
31) Family number: 44279403 (US2012227926A)

ENERGY STORAGE SYSTEMS

Abstract: Source: US2012227926A There is herein described energy storage systems. More particularly, there is herein described thermal energy storage systems and use of energy storable material such as phase change material in the provision of heating and/or cooling systems in, for example, domestic dwellings.

Probable Assignee: SUNAMP LIMITED

Earliest Publication Date: 20110519



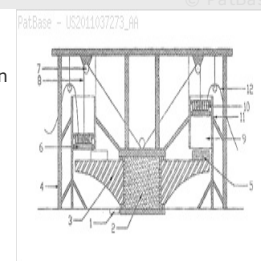
32) Family number: 40880217 (US2011037273A)

LIFTING DEVICE, POWER GENERATION DEVICE AND SEA REVERSE OSMOSIS DEVICE

Abstract: Source: US2011037273A A lifting device includes: at least one first magnetic body, which is positioned on a platform and driven by a driving unit so as to move along a predetermined track; at least one second magnetic body, which is positioned above a part of track of the first magnetic body by a supporting device, and the magnetism of which is repulsive to that of the first magnetic body; and a lifting mechanism, which is fixedly connected to the second magnetic body, the second magnetic body is lifted or lowered according to the first magnetic body passing through or leaving from the second magnetic body during its movement course so as to cause the lifting mechanism to be lifted, lowered or swung. The lifting device can lift heavy objects by magnetic energy existing in the nature and has a simple structure, broad applicability, energy saving and high environmental protectionability. A power generation device and a sea reverse osmosis device that have the lifting device are disclosed.

Probable Assignee: JIN JIN PACIFIQUE COMP

Earliest Publication Date: 20070905



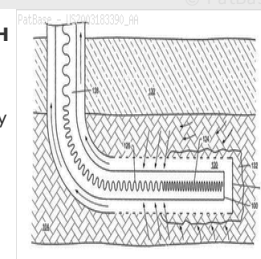
33) Family number: 66393252 (US2003183390A)

METHODS AND SYSTEMS FOR HEATING A HYDROCARBON CONTAINING FORMATION IN SITU WITH AN OPENING CONTACTING THE EARTH'S SURFACE AT TWO LOCATIONS

Abstract: Source: US2003183390A In an embodiment, a method for heating a hydrocarbon containing formation may include providing heat from one or more heaters to an opening in the formation. A first end of the opening may contact the earth's surface at a first location and a second end of the opening may contact the earth's surface at a second location. The heat may be allowed to transfer from the opening to at least a part of the formation. The transferred heat may pyrolyze at least some hydrocarbons in the formation. In certain embodiments, providing the heat to the opening may include providing heat, heated materials, and/or oxidation products from at least one heater to the opening.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20031002



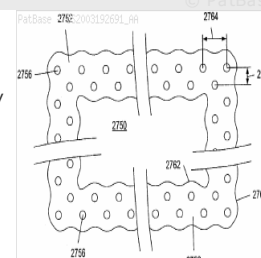
34) Family number: 66393257 (US2003192691A)

IN SITU RECOVERY FROM A HYDROCARBON CONTAINING FORMATION USING BARRIERS

Abstract: Source: US2003192691A A method is described for inhibiting migration of fluids into and/or out of a treatment area undergoing an in situ conversion process. Barriers in the formation proximate a treatment area may be used to inhibit migration of fluids. Inhibition of migration of fluids may occur before, during, and/or after an in situ treatment process. For example, migration of fluids may be inhibited while heat is provided from heaters to at least a portion of the treatment area. Barriers may include naturally occurring portions (e.g., overburden, and/or underburden) and/or installed portions.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20031016



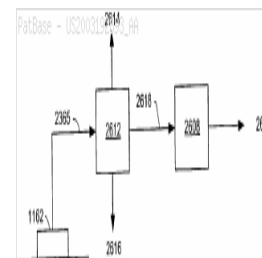
35) Family number: 66393261 (US2003192693A)

IN SITU THERMAL PROCESSING OF A HYDROCARBON CONTAINING FORMATION TO PRODUCE HEATED FLUIDS

Abstract: Source: US2003192693A A process for utilizing the heat from fluids produced from a hydrocarbon containing formation, which has been treated in situ. The in situ treatment process may include providing heat from one or more heaters to at least a portion of the formation. The heat may be allowed to transfer from one or more heaters to a part of the formation such that heat from the one or more heaters pyrolyzes at least some hydrocarbons within the part of the formation. Hydrocarbons may be produced from the formation. In an embodiment, heat from the produced fluids may be used for other processes. Examples of other processes may include, but are not limited to, hydrotreating, separations, steam cracking, olefin production, etc.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20031016



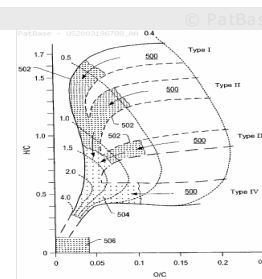
36) Family number: 66393268 (US2003196788A)

PRODUCING HYDROCARBONS AND NON-HYDROCARBON CONTAINING MATERIALS WHEN TREATING A HYDROCARBON CONTAINING FORMATION

Abstract: Source: US2003196788A A method for treating a hydrocarbon containing formation is provided. In one embodiment, heat from one or more heaters may be provided to at least a portion of the formation. Heat may be allowed to transfer from the one or more heaters to at least a part of the formation. In certain embodiments, the heat from the one or more heaters may pyrolyze at least some hydrocarbons within the formation. In an embodiment, a first fluid may be introduced into at least a portion of the formation. The portion may have previously undergone an in situ conversion process. A mixture of the first fluid and a second fluid (or a second compound) may be produced from the formation. In some embodiments, a first fluid may be provided to the formation prior to pyrolyzing hydrocarbons in the formation, and a second fluid (or a second compound) may be produced prior to pyrolyzing hydrocarbons in the formation. In some embodiments the second fluid or second compound include minerals, metals, salts, or other compounds that may be recovered.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20031023



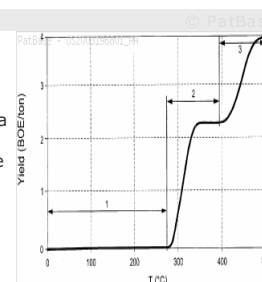
37) Family number: 66393274 (US2003196801A)

IN SITU THERMAL PROCESSING OF A HYDROCARBON CONTAINING FORMATION VIA BACKPRODUCING THROUGH A HEATER WELL

Abstract: Source: US2003196801A A process for producing hydrocarbons through a heater wellbore positioned in a hydrocarbon containing formation. The in situ treatment process may include providing heat from one or more heaters to at least a portion of the formation. The heat may be allowed, in some embodiments, to transfer from one or more heaters to a selected section of the formation. Heat that is allowed to transfer to the selected section may pyrolyze at least some of the hydrocarbons within the selected section. The process may include, in some embodiments, selectively limiting a temperature proximate a selected portion of a heater wellbore to inhibit coke formation at or near the selected portion. In some embodiments fluids may be produced at certain locations of a heater wellbore such that coke formation is inhibited.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20031023



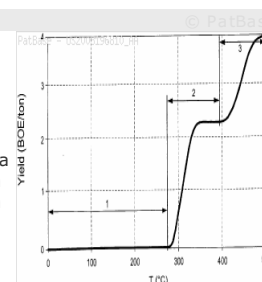
38) Family number: 66393277 (US2003196810A)

TREATMENT OF A HYDROCARBON CONTAINING FORMATION AFTER HEATING

Abstract: Source: US2003196810A A method for treating a hydrocarbon containing formation is provided. In one embodiment, heat from one or more heaters may be provided to at least a portion of the formation. Heat may be allowed to transfer from the one or more heaters to at least a part of the formation. In certain embodiments, the heat from the one or more heaters may pyrolyze at least some hydrocarbons in the formation. In an embodiment, a first fluid may be introduced into at least a portion of the formation. The portion may have previously undergone an in situ conversion process. A mixture of the first fluid and a second fluid may be produced from the formation. Such mixture may, in some embodiments, be treated or burned.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20031023



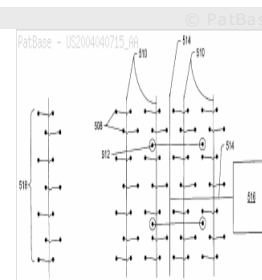
39) Family number: 66393302 (US2004040715A)

IN SITU PRODUCTION OF A BLENDING AGENT FROM A HYDROCARBON CONTAINING FORMATION

Abstract: Source: US2004040715A An in situ process for treating a hydrocarbon containing formation is provided. The process may include providing heat from one or more heaters to at least a portion of the formation. The heat may be allowed to transfer from the reaction zone to a part of the formation such that heat from one or more heaters pyrolyzes at least some hydrocarbons within the part of the formation. A blending agent may be produced from the part of the formation, wherein a mixture produced with the blending agent has at least one selected property.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20040304



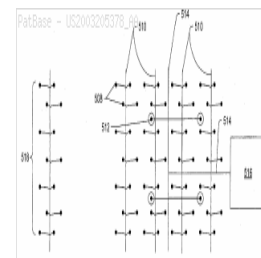
40) Family number: 66393288 (US2003205378A)

IN SITU RECOVERY FROM LEAN AND RICH ZONES IN A HYDROCARBON CONTAINING FORMATION

Abstract: Source: US2003205378A A method for treating lean and rich zones of a hydrocarbon containing formation is provided. In one embodiment, heat from one or more heaters may be provided to at least a portion of the formation. Heat may be allowed to transfer from the one or more heaters to a first part of the formation. In certain embodiments, the heat from the one or more heaters may pyrolyze at least some hydrocarbons within the first part of the formation. The method may include producing a mixture through a second part of the formation. In some embodiments, the produced mixture may include at least some pyrolyzed hydrocarbons from the first part of the formation. In an embodiment, the second part of the formation may have a higher permeability than the first part of the formation.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20031106



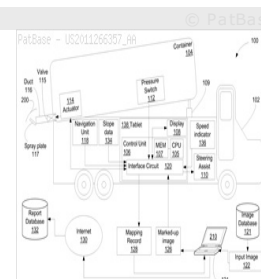
41) Family number: 48339960 (US2011266357A)

SYSTEM AND METHOD FOR LAND APPLICATION OF WASTE FLUIDS

Abstract: Source: US2011266357A A system and method are provided for automated control of application of fluid to a surface. A surface map is annotated with shapes designating zones for spraying, and excluding others. A control system in a vehicle uses the annotated map and GPS to assist the operator of the vehicle avoid spraying on excluded zones, and provides a record of the spraying operation including locations sprayed and fluid spray rates. The control system operates valves to control spraying from a container on the vehicle, based on several parameters, so as to avoid spraying excluded zones and steep slopes, to avoid overlaps, and to limit fluid spray rates below pre-determined maximums. The system further assists the operator by providing a visual guide on a display. A kit can be provided to retrofit a vehicle for landspraying.

Probable Assignee: SUMMIT LIABILITY SOLUTIONS INC

Earliest Publication Date: 20110208



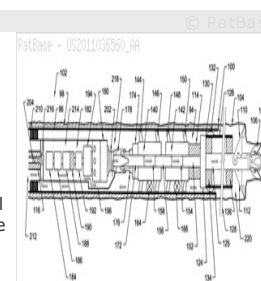
42) Family number: 48319761 (US2011036560A)

LONG-LASTING HYDRAULIC SEALS FOR SMART SHUTTLES, FOR COILED TUBING INJECTORS, AND FOR PIPELINE PIGS

Abstract: Source: US2011036560A A well conveyance apparatus for conveying equipment into a wellbore possessing long-lasting movable and slidable hydraulic seals against the interior of a borehole casing located within a wellbore in a geological formation in the earth that is caused to move by the application of pressurized wellbore fluids against the seals. The seals are allowed to rotate on bearings about the tool mandrel to prevent the build-up of torque on the seals to minimize wear and to extend the life of the seals. Vibratory means are attached to the tool mandrel to vibrate the sealing portion of the seals, so as to extend the life of the seals and to minimize wear of the seals. Sensor arrays provide information to a computer system that is used to control the vibratory means, pressure relief valves, and other parameters to minimize wear of the hydraulic seals.

Probable Assignee: SMART DRILLING AND COMPLETION INC

Earliest Publication Date: 20110217



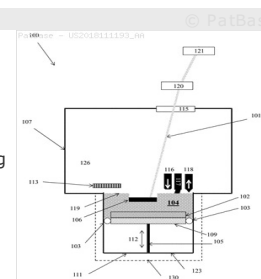
43) Family number: 69433608 (US2018111193A)

OPERATION OF THREE-DIMENSIONAL PRINTER COMPONENTS

Abstract: Source: US2018111193A The present disclosure provides three-dimensional (3D) printing systems, apparatuses, methods and non-transitory computer readable media for the production of at least one desired 3D object. The 3D printer described herein comprises, inter alia, an opening that comprises a first side and a second side. A component of the 3D printing, such as a layer dispenser, may be conveyed from the first side of the opening to the second side of the opening (e.g., and vice versa) during the 3D printing. The opening may be closeable. A closure of the opening may seclude the component during at least a portion of the 3D printing. Additional features relating to components of the 3D printing systems are described herein.

Probable Assignee: VELO3D INC

Earliest Publication Date: 20180426



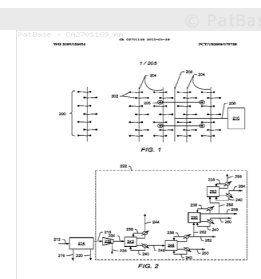
44) Family number: 44921378 (GB2465911A)

SYSTEMS, METHODS, AND PROCESSES UTILIZED FOR TREATING SUBSURFACE FORMATIONS

Abstract: Source: GB2465911A Systems, methods, and/or heaters for treating a subsurface formation are described herein. Some embodiments also generally relate to heaters that have novel components therein. Such heaters may be obtained by using the systems and methods described.

Probable Assignee: SHELL INT RESEARCH

Earliest Publication Date: 20090423



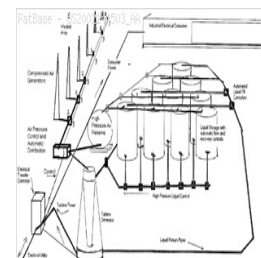
45) Family number: 28329069 (US2002144503A)

WIND POWERED HYDROELECTRIC POWER PLANT AND METHOD OF OPERATION THEREOF

Abstract: Source: US2002144503A A hydroelectric power plant uses a plurality of windmills connected to compressed air generators to produce pressurized air. Pressurized air is used to drive water through a turbine to produce electrical power. The water is recycled and the power plant includes reserve pressurized air tanks to allow the plant to continue to operate when the wind levels are not sufficient to produce high pressure air. The power plant is designed to be operated on a continuous basis based on wind power. When the wind subsides and the reserve capacity has been exhausted, electricity can be drawn from the local utility supplier. When excess power is generated by the power plant, electricity from the power plant can be added to the grid of the local electricity supplier.

Probable Assignee: NEW WORLD GENERATION INC

Earliest Publication Date: 20021010



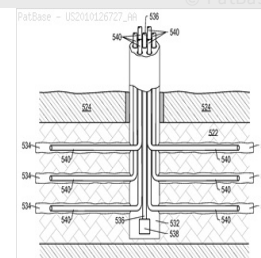
46) Family number: 66393306 (US2010126727A)

IN SITU RECOVERY FROM A HYDROCARBON CONTAINING FORMATION

Abstract: Source: US2010126727A An in situ process for treating a hydrocarbon containing formation is provided. The process may include providing heat from one or more heaters to at least a portion of the formation. The heat may be allowed to transfer from the one or more heaters to a part of the formation such that heat from the one or more heat sources pyrolyzes at least some hydrocarbons within the part. Hydrocarbons may be produced from the formation.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20100527



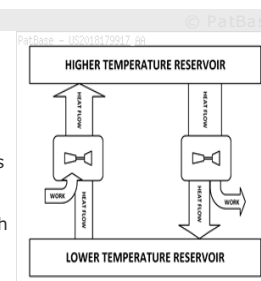
47) Family number: 70238138 (US2018179917A)

VARIABLE PRESSURE INVENTORY CONTROL OF CLOSED CYCLE SYSTEM WITH A HIGH PRESSURE TANK AND AN INTERMEDIATE PRESSURE TANK

Abstract: Source: US2018179917A Systems and methods for variable pressure inventory control of a closed thermodynamic cycle power generation system or energy storage system, such as a reversible Brayton cycle system, with at least a high pressure tank and an intermediate pressure tank are disclosed. Operational parameters of the system such as working fluid pressure, turbine torque, turbine RPM, generator torque, generator RPM, and current, voltage, phase, frequency, and/or quantity of electrical power generated and/or distributed by the generator may be the basis for controlling a quantity of working fluid that circulates through a closed cycle fluid path of the system.

Probable Assignee: X DEVELOPMENT LLC

Earliest Publication Date: 20180628



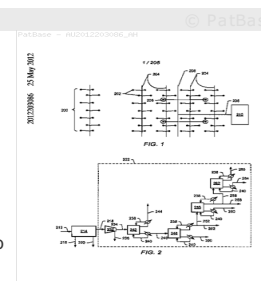
48) Family number: 51337255 (AU2012203086A)

VARIABLE VOLTAGE TRANSFORMER

Abstract: Source: AU2012203086A Variable Voltage Transformer Abstract In a first aspect there is disclosed a variable voltage transformer (772), the variable voltage transformer comprises a primary winding (754) configured to be coupled to a voltage power source that provides a first voltage across the primary winding and a secondary winding (756) electrically isolated from the primary winding, wherein the secondary winding is configured to step down the first voltage to a second voltage that is a preset percentage of the first voltage. A multistep load tap changer (7) coupled to the secondary winding is provided, wherein the load tap changer divides the second voltage into a selected number of voltage steps, the voltage steps incremented from a selected minimum percentage of the second voltage to a selected maximum percentage of the second voltage, wherein an electrical load is configured to be coupled to the multistep load tap changer to provide electrical power to the load with a selected voltage, the multistep load tap changer being configured to tap a selected voltage step in order to provide the selected voltage to the electrical load.

Probable Assignee: SHELL INT RESEARCH

Earliest Publication Date: 20120614



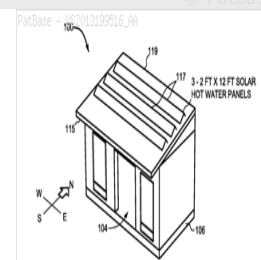
49) Family number: 50818080 (US2013199516A)

MULTIPURPOSE UTILITY STRUCTURE

Abstract: Source: US2013199516A A system and method of creating and operating a utility structure coupled to a second structure is provided. A utility structure can include a renewable energy source, a control system, water heating system, a communications system, and a solar hot air module. In connection with these features, a utility structure can provide utility access, heated and/or cooled water, and HVAC to the connected structure. A utility structure can be free standing, portable, or attached to another structure.

Probable Assignee: GLOBAL SOLAR WATER AND POWER SYSTEMS INC

Earliest Publication Date: 20120322



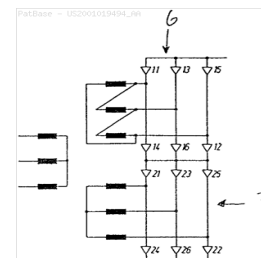
50) Family number: 33497443 (US2001019494A)

DC TRANSFORMER/REACTOR

Abstract: Source: US2001019494A The present invention relates to a DC transformer/reactor comprising a magnetic circuit, wherein the magnetic circuit comprises a magnetic core and at least one winding. The winding comprises at least one current-carrying conductor. Each winding comprises also an insulation system, which comprises on the one hand at least two semiconducting layers, wherein each layer constitutes substantially an equipotential surface, and on the other hand between them is arranged a solid insulation.

Probable Assignee: ABB AB

Earliest Publication Date: 19971201



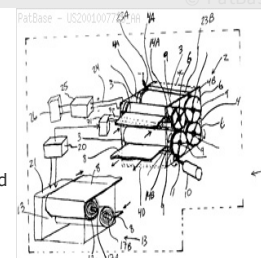
51) Family number: 31036851 (US2001007725A)

METAL-AIR FUEL CELL BATTERY SYSTEM EMPLOYING A PLURALITY OF MOVING CATHODE STRUCTURES FOR IMPROVED VOLUMETRIC POWER DENSITY

Abstract: Source: US2001007725A In an air-metal fuel cell battery (FCB) system, wherein a plurality of movable cathode structures are mounted within a compact housing through which metal-fuel tape is transported along a predetermined path while an ionically-conductive medium is disposed between the metal-fuel tape and each movable cathode structure at points of contact. In illustrative embodiments, the movable cathode structures are realized as rotatable cathode cylinders, and transportable cathode belts. The ionically-conductive medium is realized as a solid-state ionically-conductive film applied to the cathode structures and/or metal-fuel tape, as well as ionically-conductive belt structures transported at the same velocity as corresponding cathode structures (e.g. cathode cylinders or belts) at the locus of points at which the ionically-conductive medium contacts the moving cathode structure and the moving metal-fuel tape. By virtue of the present invention, the volumetric power density characteristics of FCB systems can be significantly improved, while the likelihood of damage to the cathode structures and metal-fuel tape is substantially reduced.

Probable Assignee: REVEO INC

Earliest Publication Date: 19990415



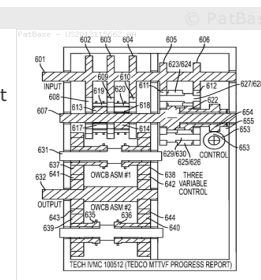
52) Family number: 48202366 (US2012115662A)

SYSTEM AND METHOD FOR PROVIDING A CONSTANT OUTPUT FROM A VARIABLE FLOW INPUT

Abstract: Source: US2012115662A A system and method for providing a constant output from a variable flow input comprises a liquid flow energy input, for example, air or water for driving a constant speed generator. An inner and outer cam assembly is controlled by a control input to achieve varying eccentricity and control the output speed at an output shaft to be constant despite a varying rotational velocity input at an input shaft. A feedback control may be provided between one of the input shaft and the output shaft and the inner and outer cam assembly to maintain constant output by varying the eccentricity. The constant output may drive a constant speed generator having an infinitely variable torque generator. In this manner, a power grid may be provided with constant frequency alternating current at, for example, 50 Hz (Europe) or 60 Hz (USA). Also, a pair of non-circular gears, for example, a square gear and a cloverleaf gear may be used to reduce ripples in rotational velocity measured at the output shaft for a four OWCB constant output, variable flow input system.

Probable Assignee: DIFFERENTIAL DYNAMICS CORP

Earliest Publication Date: 20110127



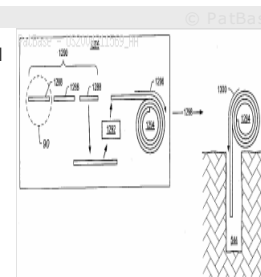
53) Family number: 66393303 (US2004211569A)

INSTALLATION AND USE OF REMOVABLE HEATERS IN A HYDROCARBON CONTAINING FORMATION

Abstract: Source: US2004211569A In an embodiment, a system may be used to heat a hydrocarbon containing formation. The system may include a heater placed in an opening in the formation. The system may allow heat to transfer from the heater to a part of the formation. The transferred heat may pyrolyze at least some hydrocarbons in the formation. The heater may be removable from the opening in the formation and redeployable in at least one alternative opening in the formation.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20041028



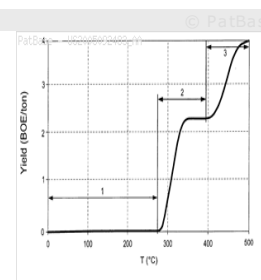
54) Family number: 66393304 (US2005092483A)

IN SITU THERMAL PROCESSING OF A HYDROCARBON CONTAINING FORMATION USING A NATURAL DISTRIBUTED COMBUSTOR

Abstract: Source: US2005092483A An in situ process for treating a hydrocarbon containing formation is provided. The process may include providing heat from one or more heat sources to at least a portion of the formation. Heat sources may include a natural distributed combustor. The natural distributed combustor may include an oxidizing fluid source to provide oxidizing fluids to a reaction zone in the formation to generate heat within the reaction zone. The heat may be allowed, in some embodiments, to transfer from the reaction zone to a selected section of the formation such that heat from one or more heat sources pyrolyzes at least some hydrocarbons within the selected section. Hydrocarbons may be produced from the formation.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20050505



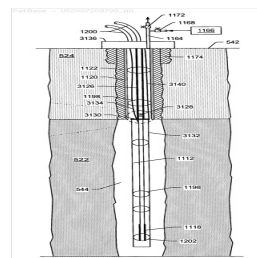
55) Family number: 66393305 (US2007209799A)

IN SITU RECOVERY FROM A HYDROCARBON CONTAINING FORMATION

Abstract: Source: US2007209799A An in situ process for treating a hydrocarbon containing formation is provided. The process may include providing heat from one or more heaters to at least a portion of the formation. The heat may be allowed to transfer from the one or more heaters to a part of the formation such that heat from the one or more heat sources pyrolyzes at least some hydrocarbons within the part. Hydrocarbons may be produced from the formation.

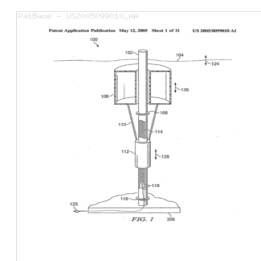
Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20070913



Probable Assignee: HIRSCH WILLIAM W

Earliest Publication Date: 20050512



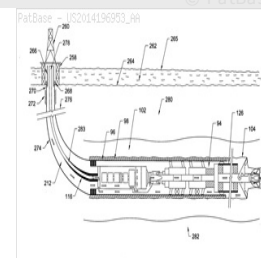
61) Family number: 56896123 (US2014196953A)

DRILLING APPARATUS

Abstract: Source: US2014196953A A drilling apparatus comprised of a multiplicity of subassemblies for drilling an open-hole extension from within an existing cased borehole located in a geological formation for the production of oil and gas. In one embodiment, one subassembly includes a motor located within a cased section of the borehole that rotates a drill pipe segment attached to a rotary drill bit in the open-hole to drill the open-hole extension of the well. In another embodiment, a shroud encloses the motor located within the cased portion of the well that is used to control the mud flow to and from the bit in the open-hole during the drilling process.

Probable Assignee: SMART DRILLING AND COMPLETION INC

Earliest Publication Date: 20140717



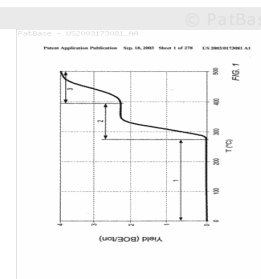
62) Family number: 29081531 (US2003173081A)

IN SITU THERMAL PROCESSING OF AN OIL RESERVOIR FORMATION

Abstract: Source: US2003173081A An in situ process for treating an oil containing formation is provided. The process may include providing heat from one or more heaters to at least a portion of the formation. The heat may be allowed to transfer from the one or more heaters to a part of the formation such that heat from the one or more heat sources pyrolyzes at least some hydrocarbons within the part. Hydrocarbons may be produced from the formation.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20030918



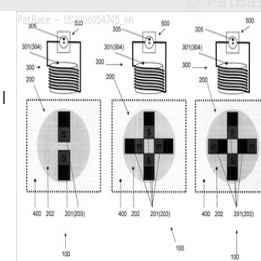
63) Family number: 41574463 (US2008054745A)

MODULAR MAGNETO-MECHANICAL DEVICE

Abstract: Source: US2008054745A An electromechanical device has a rotor, a stator, and a module that at least partially houses the rotor. During normal operation of the electromechanical device, the stator is positioned external to and separate from the module.

Probable Assignee: MARTIN TECHNOLOGIES LLC A OF STATE OF TEXAS CORP

Earliest Publication Date: 20080306



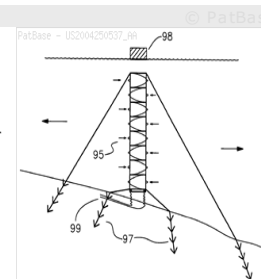
64) Family number: 31393709 (US2004250537A)

MACHINE AND SYSTEM FOR POWER GENERATION THROUGH MOVEMENT OF WATER

Abstract: Source: US2004250537A A machine and system for power generation through movement of water having an array of power generating cells electrically interconnected, where the array is configured in an interchangeable modular fashion and the cells are positioned to receive kinetic energy from the movement of water to generate electricity through the movement of an electrical turbine within each cell. The individual turbines and cells may generate relatively small amounts of electricity and use polymer magnetics in the impellers and windings in the turbine to withstand ocean environments and are stacked on electrically conductive trays for ease of installation and replacement.

Probable Assignee: HYDRO GREEN ENERGY LLC

Earliest Publication Date: 20041216



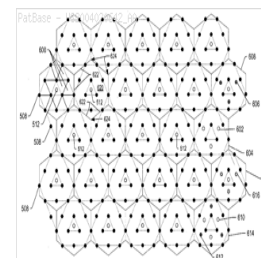
65) Family number: 66393301 (US2004020642A)

IN SITU RECOVERY FROM A HYDROCARBON CONTAINING FORMATION USING CONDUCTOR-IN-CONDUIT HEAT SOURCES WITH AN ELECTRICALLY CONDUCTIVE MATERIAL IN THE OVERBURDEN

Abstract: Source: US2004020642A In an embodiment, a system may be used to heat a hydrocarbon containing formation. The system may include a conduit placed within an opening in the formation. A conductor may be placed within the conduit. The conductor may provide heat to a portion of the formation. In some embodiments, an electrically conductive material may be coupled to a portion of the conductor in the overburden. The electrically conductive material may lower the electrical resistance of the portion of the conductor in the overburden. Lowering the electrical resistance of the portion of the conductor in the overburden may reduce the heat output of the portion in the overburden. The system may allow heat to transfer from the conductor to a section of the formation.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20040205



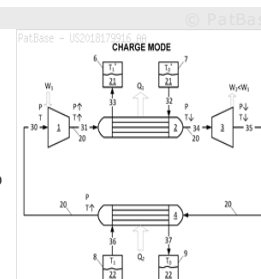
66) Family number: 70238137 (US2018179916A)

STORAGE OF EXCESS HEAT IN COLD SIDE OF HEAT ENGINE

Abstract: Source: US2018179916A Extra heat in a closed cycle power generation system, such as a reversible closed Brayton cycle system, may be dissipated between discharge and charge cycles. An extra cooling heat exchanger may be added on the discharge cycle and disposed between a cold side heat exchanger and a compressor inlet. Additionally or alternatively, a cold thermal storage medium passing through the cold side heat exchanger may be allowed to heat up to a higher temperature during the discharge cycle than is needed on input to the charge cycle and the excess heat then dissipated to the atmosphere.

Probable Assignee: GOOGLE INC

Earliest Publication Date: 20180628



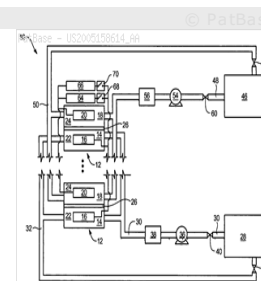
67) Family number: 32088632 (US2005158614A)

SYSTEM AND METHOD FOR OPTIMIZING EFFICIENCY AND POWER OUTPUT FROM A VANADIUM REDOX BATTERY ENERGY STORAGE SYSTEM

Abstract: Source: US2005158614A An energy storage system includes a vanadium redox battery that interfaces with a control system to optimize performance and efficiency. The control system calculates optimal pump speeds, electrolyte temperature ranges, and charge and discharge rates. The control system instructs the vanadium redox battery to operate in accordance with the prescribed parameters. The control system further calculates optimal temperature ranges and charge and discharge rates for the vanadium redox battery.

Probable Assignee: VRB ENERGY INC

Earliest Publication Date: 20050721



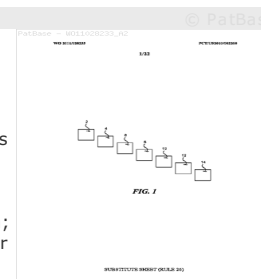
68) Family number: 51299582 (WO11028233A2)

SYSTEMS AND METHODS FOR SUSTAINABLE ECONOMIC DEVELOPMENT THROUGH INTEGRATED FULL SPECTRUM PRODUCTION OR RENEWABLE MATERIAL RESOURCES USING SOLAR THERMAL

Abstract: In one embodiment of the present invention, a system for providing a renewable source of material resources is provided comprising: a first source of renewable energy; first stream of materials from a first materials source; an electrolyzer coupled to the first source of renewable energy and the first stream of materials, wherein the electrolyzer is configured to produce a first material resource by electrolysis; a processor for further processing or use or the material resource to produce a second material resource, wherein the processor comprises a solar collector and where the solar collector is configured to provide heat to the first materials resource for disassociation; and a material resource storage coupled to the electrolyzer for receiving the material resource from the electrolyzer or providing the material resource to the processor for further processing or use.

Probable Assignee: MCALISTER TECHNOLOGIES LLC

Earliest Publication Date: 20110310



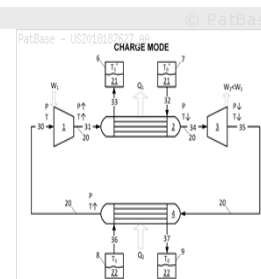
69) Family number: 70341719 (US2018187627A)

USE OF EXTERNAL AIR FOR CLOSED CYCLE INVENTORY CONTROL

Abstract: Source: US2018187627A Systems and methods relating to use of external air for inventory control of a closed thermodynamic cycle system or energy storage system, such as a reversible Brayton cycle system, are disclosed. A method may involve, in a closed cycle system operating in a power generation mode, circulating a working fluid may through a closed cycle fluid path. The closed cycle fluid path may include a high pressure leg and a low pressure leg. The method may further involve in response to a demand for increased power generation, compressing and dehumidifying environmental air. And the method may involve injecting the compressed and dehumidified environmental air into the low pressure leg.

Probable Assignee: GOOGLE INC

Earliest Publication Date: 20180705



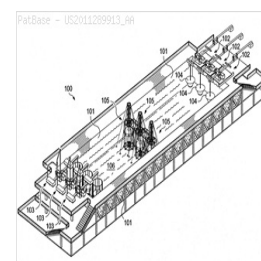
70) Family number: 50014044 (US2011289913A)

WAVE ENERGY TRANSFER SYSTEM

Abstract: Source: US2011289913A A system and method of wave energy transfer including the generation and capture of waves in a tank filled with liquid is disclosed. The wave energy transfer system comprises wave generation apparatus including a displacement block for generating the waves in the tank, and wave capture apparatus including a buoyancy block for capturing the waves to convert the wave motion and provide fluid flow. The wave capture apparatus may also include an artificial pump head for stabilizing the fluid flow provided by the buoyancy block of the wave capture apparatus. Testing apparatus including a tank filled with liquid and wave generation devices is also disclosed.

Probable Assignee: FORSTER WILLIAM

Earliest Publication Date: 20111201



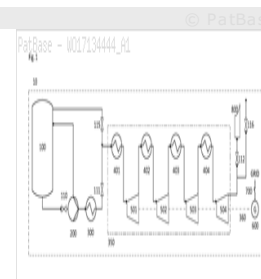
71) Family number: 62111354 (WO1713444A1)

IMPROVEMENTS IN POWER RECOVERY

Abstract: A system comprising a cryogenic storage tank for storing cryogen, a pump in fluid communication with the cryogenic storage tank for pumping cryogen from the cryogenic storage tank to a high pressure, an evaporator in fluid communication with the pump for evaporating the high-pressure cryogen from the pump to form a high-pressure gas, a power recovery apparatus comprising a drive shaft for transmitting mechanical power, and an electrical machine mechanically coupled to the drive shaft of the power recovery apparatus for converting the mechanical power recovered by the power recovery apparatus into electrical energy. The system is operable in a power recovery mode in which the power recovery apparatus is driven by and recovers mechanical power from high-pressure gas supplied by the evaporator, and a motored mode in which the power recovery apparatus is driven by a driving means other than high-pressure gas supplied by the evaporator.

Probable Assignee: HIGHVIEW ENTPR LTD

Earliest Publication Date: 20170810



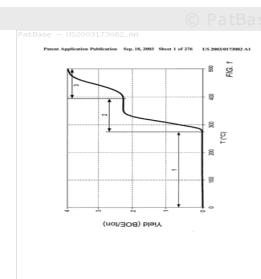
72) Family number: 29081532 (US2003173082A)

IN SITU THERMAL PROCESSING OF A HEAVY OIL DIATOMITE FORMATION

Abstract: Source: US2003173082A An in situ process for treating a diatomite formation is provided. The process may include providing heat from one or more heaters to at least a portion of the formation. The heat may be allowed to transfer from the one or more heaters to a part of the formation such that heat from the one or more heat sources pyrolyzes at least some hydrocarbons within the part. Hydrocarbons may be produced from the formation.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20030918



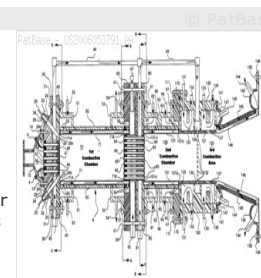
73) Family number: 32281329 (US2006053791A)

METHOD AND APPARATUS FOR THE PRODUCTION OF ENERGY

Abstract: Source: US2006053791A The invention provides processes and apparatuses for safely, rapidly, cost-effectively and efficiently producing a superheated steam product or dry saturated steam product that can be employed to generate electrical power, or in other manufacturing and/or non-manufacturing processes, in an environmentally clean manner without causing corrosion to electrical power-generating devices. These processes and apparatuses involve the combustion of one or more fuels containing the elements hydrogen and/or carbon, which can be derived from waste materials, such as the rubber from scrap tires. Water that circulates around one or more combustion chambers and/or areas, but that does not enter into the combustion chambers or areas, becomes converted into a high purity steam product. The present invention also provides processes and apparatuses for recycling or eliminating waste materials, and for transforming hazardous materials into non-hazardous materials, and fuels that can be employed in the foregoing processes and apparatuses.

Probable Assignee: ADVANCED COMBUSTION ENERGY SYSTEMS INC

Earliest Publication Date: 20051006



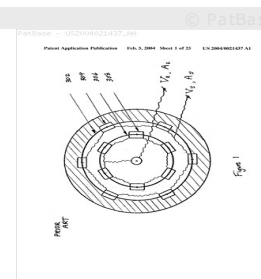
74) Family number: 30222504 (US2004021437A)

ADAPTIVE ELECTRIC MOTORS AND GENERATORS PROVIDING IMPROVED PERFORMANCE AND EFFICIENCY

Abstract: Source: US2004021437A An adaptive architecture for electric motors, generators and other electric machines. An adaptive electric machine provides optimal performance by dynamically adapting its controls to changes in user inputs, machine operating conditions and machine operating parameters. Isolating the machine's electromagnetic circuits allows effective control of more independent machine parameters, enabling greater freedom to optimize and providing adaptive motors and generators that are cheaper, smaller, lighter, more powerful, and more efficient than conventional designs. An electric vehicle with in-wheel adaptive motors enables delivery of higher power with lower unsprung mass, giving better torque-density. The motor control system can adapt to the vehicle's operating conditions, including starting, accelerating, turning, braking, and cruising at high speeds, thereby consistently providing higher efficiency. A wind powered adaptive generator can adapt to changing wind conditions, consistently providing optimal performance. An adaptive architecture may improve performance in a wide variety of electric machine applications, particularly those requiring optimal efficiency over a range of operating conditions.

Probable Assignee: MATRA MFG AND SERVICES SAS

Earliest Publication Date: 20031231



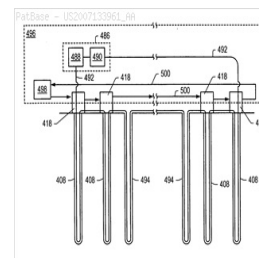
75) Family number: 42104030 (US2007133961A)

METHODS AND SYSTEMS FOR PRODUCING FLUID FROM AN IN SITU CONVERSION PROCESS

Abstract: Source: US2007133961A A system that includes a plurality of heat sources configured to heat a portion of a formation is described. At least one production well is in the formation. A bottom portion of the production well is a sump in an underburden of the formation below the heated portion of the formation. Fluids from the heated portion of the formation are allowed to flow into the sump. A pump system has an inlet in the sump. A production conduit is coupled to the pump system. The production conduit is configured to transport fluids in the sump out of the formation.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20070614



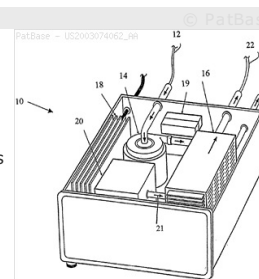
76) Family number: 49546072 (US2003074062A)

PHOTOLYTIC ARTIFICIAL LUNG

Abstract: Source: US2003074062A The present invention is directed to a photolytic artificial lung. The photolytic artificial lung converts water to oxygen for blood absorption, regulates pH, the removes carbon dioxide, and co-produces electrical power is disclosed. The photolytic artificial lung includes a photolytic cell where all of the chemical reactions occur. The photolytic cell disclosed herein can also be used to direct chemical reactions in organs other than the lung. Also disclosed herein is a gas sorption device for removing carbon dioxide from the system by chemical sorption.

Probable Assignee: BATTELLE MEMORIAL INST

Earliest Publication Date: 20030213



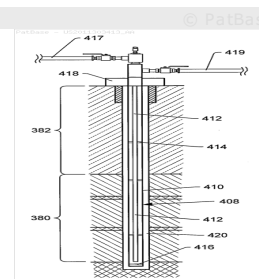
77) Family number: 50099514 (US2011303413A)

METHODS AND SYSTEMS FOR PRODUCING FLUID FROM AN IN SITU CONVERSION PROCESS

Abstract: Source: US2011303413A A system that includes a plurality of heat sources configured to heat a portion of a formation is described. At least one production well is in the formation. A bottom portion of the production well is a sump in an underburden of the formation below the heated portion of the formation. Fluids from the heated portion of the formation are allowed to flow into the sump. A pump system has an inlet in the sump. A production conduit is coupled to the pump system. The production conduit is configured to transport fluids in the sump out of the formation.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20111215



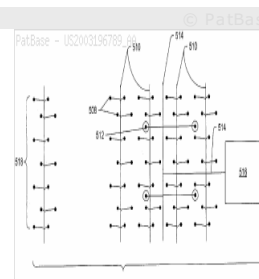
78) Family number: 66393273 (US2003196789A)

IN SITU THERMAL PROCESSING OF A HYDROCARBON CONTAINING FORMATION AND UPGRADING OF PRODUCED FLUIDS PRIOR TO FURTHER TREATMENT

Abstract: Source: US2003196789A An in situ treatment process may include providing heat from one or more heaters to at least a portion of the formation. The heat may be allowed to transfer from the one or more heaters to a part of the formation. A fluid may be produced from at least part of the formation. Heat and/or other products in or from fluids produced from the formation may be used for hydrotreating.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20031023



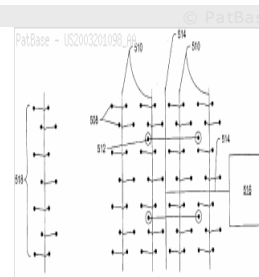
79) Family number: 66393286 (US2003201098A)

IN SITU RECOVERY FROM A HYDROCARBON CONTAINING FORMATION USING ONE OR MORE SIMULATIONS

Abstract: Source: US2003201098A Systems and methods of using a computer system to simulate a process for in situ treatment of a hydrocarbon containing formation are provided. The in situ process may include providing heat from one or more heat sources to at least one portion of the formation. The in situ process may, in some embodiments, include allowing the heat to transfer from the one or more heat sources to a selected section of the formation. In some embodiments, the method may include operating the in situ process using one or more operating parameters. At least one operating parameter of the in situ process may be provided to the computer system. In certain embodiments, at least one parameter may be used with a simulation method and the computer system to provide assessed information about the in situ process.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20031030



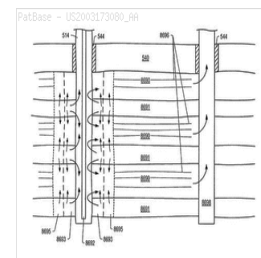
80) Family number: 24116880 (US2003173080A)

IN SITU THERMAL PROCESSING OF AN OIL SHALE FORMATION USING A PATTERN OF HEAT SOURCES

Abstract: Source: US2003173080A A oil shale formation may be treated using an in situ thermal process. A mixture of hydrocarbons, H₂, and/or other formation fluids may be produced from the formation. Heat may be applied to the formation to raise a temperature of a portion of the formation to a pyrolysis temperature. Heat sources may be used to heat the formation. The heat sources may be positioned within the formation in a selected pattern.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20030918



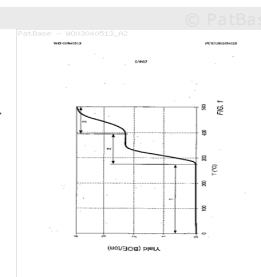
81) Family number: 66393244 (WO03040513A2)

IN SITU THERMAL PROCESSING OF A HYDROCARBON CONTAINING FORMATION

Abstract: An in situ process for treating a hydrocarbon containing formation is provided. The process may include providing heat from one or more heaters to at least a portion of the formation. The heat may be allowed to transfer from the one or more heaters to a part of the formation such that heat from the one or more heat sources pyrolyzes at least some hydrocarbons within the part. Hydrocarbons may be produced from the formation.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20030515



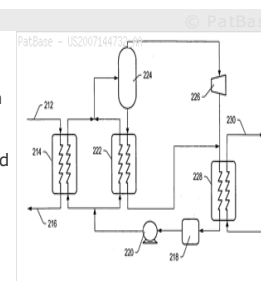
82) Family number: 42104027 (US2007144732A)

LOW TEMPERATURE BARRIERS FOR USE WITH IN SITU PROCESSES

Abstract: Source: US2007144732A A method of forming and maintaining a low temperature zone around at least a portion of a subsurface treatment area is described. The method includes reducing a temperature of heat transfer fluid with a refrigeration system. The heat transfer fluid is circulated through freeze well canisters and placed in a formation around at least a portion of the subsurface treatment area. An initial temperature of the heat transfer fluid supplied to a first freeze well canister is in a range from about -35 degrees centigrade to about -55 degrees centigrade. At least one of the well canisters includes carbon steel. The heat transfer fluid is returned to the refrigeration system.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20070628



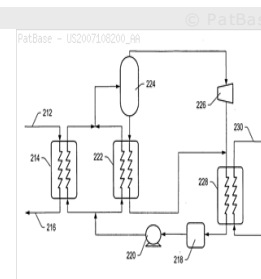
83) Family number: 42104035 (US2007108200A)

LOW TEMPERATURE BARRIER WELLBORES FORMED USING WATER FLUSHING

Abstract: Source: US2007108200A A method of forming an opening for a low temperature well is described. The method includes drilling an opening in a formation. Water is introduced into the opening to displace drilling fluid or indigenous gas in the formation adjacent to a portion of the opening. Water is produced from the opening. A low temperature fluid is applied to the opening.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20070517



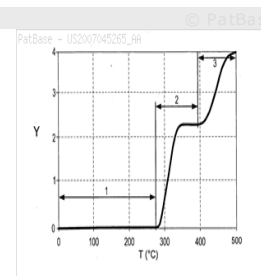
84) Family number: 42104039 (US2007045265A)

LOW TEMPERATURE BARRIERS WITH HEAT INTERCEPTOR WELLS FOR IN SITU PROCESSES

Abstract: Source: US2007045265A A system for reducing heat load applied to a frozen barrier by a heated formation is described. The system includes heat interceptor wells positioned between the heated formation and the frozen barrier. Fluid is positioned in the heat interceptor wells. Heat transfers from the formation to the fluid to reduce the heat load applied to the frozen barrier.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20070301



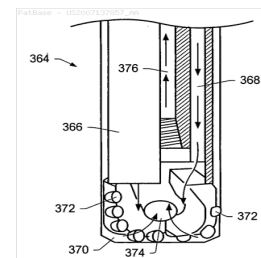
85) Family number: 42104028 (US2007137857A)

LOW TEMPERATURE MONITORING SYSTEM FOR SUBSURFACE BARRIERS

Abstract: Source: US2007137857A A system for monitoring temperature of a subsurface low temperature zone is described. The system includes a plurality of freeze wells configured to form the low temperature zone, one or more lasers, and a fiber optic cable coupled to at least one laser. A portion of the fiber optic cable is positioned in at least one freeze well. At least one laser is configured to transmit light pulses into a first end of the fiber optic cable. An analyzer is coupled to the fiber optic cable. The analyzer is configured to receive return signals from the light pulses.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20070621



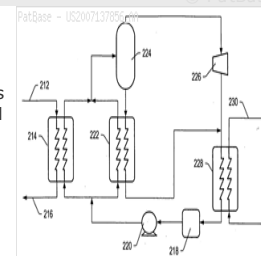
86) Family number: 42104029 (US2007137856A)

DOUBLE BARRIER SYSTEM FOR AN IN SITU CONVERSION PROCESS

Abstract: Source: US2007137856A A barrier system for a subsurface treatment area is described. The barrier system includes a first barrier formed around at least a portion of the subsurface treatment area. The first barrier is configured to inhibit fluid from exiting or entering the subsurface treatment area. A second barrier is formed around at least a portion of the first barrier. A separation space exists between the first barrier and the second barrier.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20070621



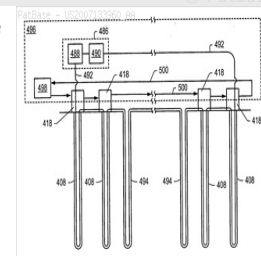
87) Family number: 42104031 (US2007133960A)

IN SITU CONVERSION PROCESS SYSTEMS UTILIZING WELLBORES IN AT LEAST TWO REGIONS OF A FORMATION

Abstract: Source: US2007133960A A system for heating a subsurface formation is described. The system includes a plurality of elongated heaters located in a plurality of openings in the formation. At least two of the heaters are substantially parallel to each other for at least a portion of the lengths of the heaters. At least two of the heaters have first end portions in a first region of the formation and second end portions in a second region of the formation. A source of time-varying current is configured to apply time-varying current to at least two of the heaters. The first end portions of at least two heaters are configured to have substantially the same voltage applied to them. The second portions of at least two heaters are configured to have substantially the same voltage applied to them.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20070614



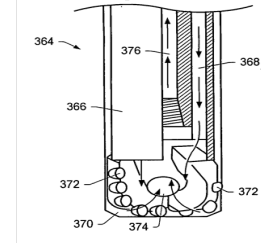
88) Family number: 42104032 (US2007133959A)

GROUPED EXPOSED METAL HEATERS

Abstract: Source: US2007133959A A system for treating a hydrocarbon containing formation is described. The system includes two or more groups of elongated heaters. The group includes two or more heaters placed in two or more openings in the formation. The heaters in the group are electrically coupled below the surface of the formation. The openings include at least partially uncased wellbores in a hydrocarbon layer of the formation. The groups are electrically configured such that current flow through the formation between at least two groups is inhibited. The heaters are configured to provide heat to the formation.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20070614



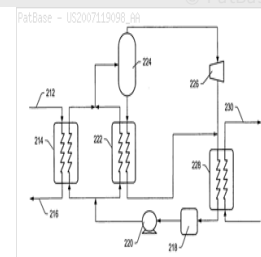
89) Family number: 42104033 (US2007119098A)

TREATMENT OF GAS FROM AN IN SITU CONVERSION PROCESS

Abstract: Source: US2007119098A A method of producing methane is described. The method includes providing formation fluid from a subsurface in situ conversion process. The formation fluid is separated to produce a liquid stream and a first gas stream. The first gas stream includes olefins. At least the olefins in the first gas stream are contacted with a hydrogen source in the presence of one or more catalysts and steam to produce a second gas stream. The second gas stream is contacted with a hydrogen source in the presence of one or more additional catalysts to produce a third gas stream. The third gas stream includes methane.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20070531



90) Family number: 42104034 (US2007108201A)

INSULATED CONDUCTOR TEMPERATURE LIMITED HEATER FOR SUBSURFACE HEATING COUPLED IN A THREE-PHASE WYE CONFIGURATION

Abstract: Source: US2007108201A A heating system for a subsurface formation is described. The heating system includes a first heater, a second heater, and a third heater placed in an opening in the subsurface formation. Each heater includes: an electrical conductor; an insulation layer at least partially surrounding the electrical conductor; and an electrically conductive sheath at least partially surrounding the insulation layer. The electrical conductor is electrically coupled to the sheath at a lower end portion of the heater. The lower end portion is the portion of the heater distal from a surface of the opening. The first heater, the second heater, and the third heater are electrically coupled at the lower end portions of the heaters. The first heater, the second heater, and the third heater are configured to be electrically coupled in a three-phase wye configuration.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20070517

