序号	标题	摘要	申请人	申请号	申请日
1	buoy	[Problem] We will provide buoys that can generate power in various postures by reducing the arrangement of thermoelectric power generation elements. [Solution means] The buoy is a buoy containing a floating body, and has a blockage housing having a blockage housing having a heat storage unit on the inner peripheral surface as a floating body, and a second heat transfer unit in which each thermally contacts the heat storage unit on the other side of the first heat transfer unit and the first heat transfer unit exposed to the outside from the occlusion housing, is liquidally held in the occlusive housing, and a plurality of thermoelectric power generation units and a plurality of thermoelectric power generation units that generate heat generated by temperature difference between the first heat transfer unit and the second heat transfer unit; It has an electronic device and an electronic device that is connected to a plurality of thermoelectric power generation units and power is supplied. [Selection Figure]Figure 2	沖電気工業株式会社	JP2020130821	2020/7/31
2	THERMOELECTRIC GENERATION DEVICE, HEATING DEVICE FOR FUEL STORAGE TANK, WASTE HEAT RECOVERY SYSTEM	PROBLEM TO BE SOLVED : To disclose a thermoelectric generation device, a heating device for a fuel storage tank, and a waste heat recovery system. SOLUTION : A thermoelectric generation device comprises : a first pipe through which fluid flows; a second pipe through which a cooling medium having a temperature lower than that of the fluid flows so as to radiate the heat of the fluid; a plurality of first heat radiation fins having one side in contact with air having a temperature lower than that of the fluid, and the other side in contact with the second pipe, so as to radiate the heat of the fluid; and a thermoelectric generation module that is located between the first pipe and the second pipe, and can generate electricity through the temperature difference between the first pipe and the second pipe. SELECTED DRAWING : Figure 1 COPYRIGHT : (C)2020, JPO&INPIT	SAMSUNG HEAVY INDUSTRIES CO LTD	JP2020052461	2020/3/24

3	Structure for operating hatch covers on cargo ships	Arrangement for operating a hatch cover (4, 4') of a cargo ship between an open position and a closed position. The invention is implemented in such a way that the arrangement comprises an apparatus (7, 8), integrated into the hatch cover or hatch coaming (2), or installed in the immediate proximity of them, for collecting and storing energy for operation of the hatch cover (4, 4').	マグレガー・フィンランド・オサケイフティオ	JP2021532525	2019/7/2
4	The fluid storage facility	The invention relates to a fluid storage facility, the storage facility comprising a supporting structure (1) and a tank, the tank having at least one tank bottom wall fixed to the supporting structure (1), wherein the bottom wall has a structure with multiple layers superimposed in a direction of thickness, including at least one sealing membrane and at least one thermal insulation barrier arranged between the sealing membrane and the supporting structure (1), wherein the bottom wall has a sump structure (9) having a rigid container (10, 11) comprising a side wall (12), the container (10, 11) being arranged through the thickness of the bottom wall, and the sump structure (9) comprising at least one fixing means (15) designed to fix the rigid container (11) to the supporting structure (1) at a fixing point, and wherein the at least one fixing means (15) is configured to allow the relative movement of the side wall (12) of the container (11) with respect to the supporting structure (1) in a transverse direction perpendicular to the side wall (12) at the fixing point of the container (11).	ギャズトランスポルト エ テクニギャズ	JP2021502608	2019/7/12
5	Ocean thermal energy conversion power plant	An power generation structure comprising a portion having a first deck portion comprising an integral multi-stage evaporator system, a second deck portion comprising an integral multi-stage condensing system, a third deck portion housing power generation equipment, a cold water pipe, and a cold water pipe connection. The evaporator and condenser systems include a multi-stage cascading heat exchange system. Warm water conduits in the first deck portion and cold water conduits in the second deck portion are integral to the structure of the portion of the platform.	Zia Bell Foundation Inc512190918	JP2014526168	2012/8/15

6	POWER GENERATION DEVICE BY OCEAN THERMAL ENERGY CONVERSION	PROBLEM TO BE SOLVED : To disclose a power generation device by ocean thermal energy conversion.SOLUTION : A power generation device by ocean thermal energy conversion according to the present invention includes an outer shell, provided with a water-containing box on a left end of the outer shell, provided with a water-containing space in the water-containing box, and provided with a water-warming space above the water-containing space, in which the water-warming space and the water-containing space are separated by a down-pressing block. The power generation device automatically repeats the power generation by the difference between the temperature of the upper-layer sea water and the temperature of the deep-sea water in the ocean. Since the deep-sea water contains much fine elements that are necessary for human body and is purer, the deep-sea water that has been converted into plain water is an optimal plain water resource. The low-temperature sea water taken up from the deep sea can bring a heating effect by absorbing the heat in the water vapor, and at the same time, brings an effect of cooling and reusing the operation liquid, has a strong interrelation property and good power generation effect.SELECTED DRAWING : Figure 1COPYRIGHT : (C)2021, JPO&INPIT	LIAN HANQI	JP2020085474	2020/5/14
7	FLUID FOR USE IN POWER GENERATION ENVIRONMENTS	PROBLEM TO BE SOLVED : To provide, in general, fluid classes for heat and power generation in a variety of well and geothermal environments for maximum energy recovery. SOLUTION : Fluid classes for use in energy recovery in a well and a geothermal environment for power generation are disclosed. The fluids fall into classes of fluids being capable of increasing thermodynamic efficiency of power generation and/or heat generation from a closed-loop geothermal system. Numerous methods are disclosed which exploit the thermodynamics of the fluids for optimum energy recovery. SELECTED DRAWING : Figure 1 COPYRIGHT : (C)2020, JPO&INPIT	EAVOR TECHNOLOGIES INC	JP2019089962	2019/5/10

8	The gas transportation and storage system and method	Disclosed is a marine vessel to transport natural gas hydrates (NGH), the marine vessel includes a hull formed from solid NGH and a skeletal structure to support the hull. Additionally disclosed is a container to transport NGH including a block of solid NGH and a skeletal structure to support the block. Further disclosed is a method of fabricating a marine vessel for transporting and storing natural gas hydrates (NGH), the method includes preparing a mold, placing a skin layer in the mold, assembling a skeletal structure in the mold, preparing a NGH slurry, and pouring into NGH slurry into the mold.	フィッシュラー エホシュア	JP2017552540	2015/12/28
9	PIPING CONNECTING MECHANISM, PIPING CONNECTING METHOD, AND PIPING CONNECTING DEVICE	PROBLEM TO BE SOLVED : To maintain the connection of piping with respect to the total weight of a long-length pipe when connecting the piping on board. SOLUTION : A piping connecting mechanism of a long-length pipe has a plurality of pieces of piping, and a connecting pipe for covering an outer face of a portion including one end of each piping, and fixed to the outer face of the piping so as to extend from the end of the piping. A minimum inside diameter portion of the connecting pipe has an inside diameter dimension smaller than an outside diameter of the piping to be connected within a temperature range of 80°C to 50°C in a temperature, and by heating and thermally expanding the minimum inside diameter portion of the connecting pipe within a temperature range higher than 50°C and equal to 450°C or lower in a temperature, the inside diameter becomes larger than the outside diameter of the piping to be connected, and an inside diameter dimension is set so that the piping to be connected can be fit to the connecting pipe. Heat-treated martensitic steel, austenitic stainless steel, or austenite-ferritic stainless steel is employed to the connecting pipe. SELECTED DRAWING : Figure 2 	MITSUI E S HOLDINGS CO LTD; DAI ICHI HEAT TREATMENT INDUSTRY CO LTD	JP2020050978	2020/3/23

10	Water floating facility	A water-borne floating facility (1) is provided with : a tank (15) for storing liquid gas; an LNG vaporizer (4) for vaporizing LNG stored in the tank (15); a gas delivery means for delivering natural gas vaporized by the LNG vaporizer (4) to an onshore facility; a heating sea water pump (18) for taking in sea water; and a power generating system for generating electricity by means of the Rankine cycle on the basis of a temperature difference between the natural gas and the sea water taken in by the heating sea water pump (18).	株式会社 商船三井	JP2019099650	2019/5/28
11				JP2019555739	2017/12/27
12	The fluid distribution subassembly having an evaporator	An evaporator comprises a plurality of thermal elements disposed in a shell interior of an evaporator shell. A primary supply line configured to carry a working fluid is disposed in the shell interior. A plurality of tube sets is fluidically coupled to the primary supply line, and each tube set is spaced apart from an adjacent tube set along the first primary supply line. Each tube set comprises a plurality of individual tubes, with each tube proximate a different subset of thermal elements within the shell interior. Each tube comprises a plurality of first fluid distribution points configured to distribute the working fluid proximate the external surface of at least one of the plurality of thermal elements, thereby increasing the amount of surface area of the thermal elements in contact with the working fluid, and increasing the overall efficiency of the evaporator.	LOCKHEED MARTIN CORPORATION	JP2017564041	2016/6/10
13	System and method for re-liquefaction of vaporized gas for a ship, and the ship for evaporated gas re-liquefying system startup	Disclosed is a boil-off gas reliquefaction system for vessels. The BOG reliquefaction system for vessels includes : a multistage compressor compressing BOG; a heat exchanger cooling the BOG compressed by the multistage compressor through heat exchange using BOG not compressed by the multistage compressor as a refrigerant; a pressure reducer disposed downstream of the heat exchanger and decompressing a fluid cooled by the heat exchanger; and a bypass line through which BOG is supplied to the multistage compressor after bypassing the heat exchanger.	デウ シップビルディング アンド マリン エンジニアリング カンパニー リミテッド	JP2020503863	2017/8/3

14	The evaporated gas reliquefaction system, evaporated gas in a reliquefaction system for discharging lubricating oil, and engine fuel supply method	Disclosed is a BOG reliquefaction system. The BOG reliquefaction system includes : a compressor compressing BOG; a heat exchanger cooling the BOG compressed by the compressor through heat exchange using BOG discharged from a storage tank as a refrigerant; a bypass line through which the BOG is supplied to the compressor after bypassing the heat exchanger; a second valve disposed on a second supply line through which the BOG used as the refrigerant in the heat exchanger is supplied to the compressor, the second valve regulating a flow rate of fluid and opening/closing of the second supply line; and a pressure reducer disposed downstream of the heat exchanger and reducing a pressure of fluid cooled by the heat exchanger, wherein the compressor includes at least one oil-lubrication type cylinder and the bypass line is joined to the second supply line downstream of the second valve.	デウ シップビルディング アンド マリン エンジニアリング カンパニー リミテッド	JP2020503971	2017/8/3
15	Vessel	A ship includes : a gas-consuming apparatus for propulsion; a tank storing LNG; a gas feed line that leads BOG generated in the tank to a compressor; a supply line that leads the BOG discharged from the compressor to the gas-consuming apparatus; a return line provided with an expansion device, the return line returning excess gas from the supply line to the tank; a regular-use heat exchanger for cooling the excess gas flowing through the return line at an upstream side of the expansion device; a non-regular-use heat exchanger for cooling the excess gas flowing through the return line between the regular-use heat exchanger and the expansion device; and a liquid feed line that leads the LNG discharged from a pump disposed in the tank to a forcing vaporizer. The non-regular-use heat exchanger performs heat exchange between the excess gas that has been cooled at the regular-use heat exchanger and the LNG flowing through the liquid feed line, and the non-regular-use heat exchanger performs the heat exchange via a phase change material. The phase change material is solidified when cooled by the LNG, and melts when heated by the excess gas whose temperature is higher than or equal to a predetermined temperature.	川崎重工業株式会社	JP2016132954	2016/7/5

16	Ocean thermal energy conversion and for the cold water pipe assembly	A cold water pipe assembly, and mechanisms for generating a cold water pipe assembly, are provided. A plurality of mooring lines are secured to a pipe end member. A pipe segment of a plurality of pipe segments is slidably coupled with respect to the mooring lines at a plurality of locations on a pipe wall of the pipe segment. The plurality of pipe segments is iteratively extended to form a pipe assembly of a desired length by joining a next pipe segment to a previous pipe segment to extend the pipe assembly, and lowering the pipe end member and the pipe assembly by extending the mooring lines. At least some of the next pipe segments are slidably coupled with respect to the mooring lines at a plurality of locations on a respective pipe wall of the at least some of the next pipe segments.	LOCKHEED MARTIN CORPORATION	JP2017532864	2015/12/18
17				JP2019089962	2019/5/10
18	Ocean thermal energy conversion system on a ship	An offshore power generation system comprising : a floating portable platform having one or more OTEC heat exchange units, one or more turbine generators, a water intake and discharge system, a mooring system; and a fixed manifold having one or more cold water intake connections in communication with a cold water pipe, and one or more cold water discharge connections in communication with the water intake system of the floating platform via an intermediate cold water conduit, wherein each cold water discharge connection is detachable from the intermediate cold water pipe.	ジ アベル ファウンデーション インコーポレイテッド	JP2016547583	2015/1/20
19	Environmental heat energy conversion	A method of electricity production using water thermal energy includes compressing an enclosed working fluid at a first vertical position relative to a surface of a body of water to cause the fluid to move to a second vertical position relative to the surface and subsequently move to the first position in a closed loop, an external environment at the second position having a greater temperature than an external environment at the first position such that the fluid transitions between a liquid phase at the first position and a vapor phase at the second position, the compressing using power from a battery, and expanding the fluid at the second position to generate electricity to charge the battery. The first and second positions may be two depths of the body of water or a height of an atmosphere above the body of water and a depth of the body of water.	SEATREC INC	JP2019545693	2017/11/1

20	GENERATION OF MECHANICAL/ELECTRICAL ENERGY FROM HEAT ENERGY USING BUOYANCY FACTOR FOR EVAPORATION OR SUBLIMATION	PROBLEM TO BE SOLVED : To generate mechanical and electrical energy from heat energy including heat energy from the sun or in the ocean. SOLUTION : A surface/flat container 1 is filled with natural gas in a liquid state, the container is connected to a liquid chamber 2, and gas rises above the liquid by heat receiving energy from the sun or seawater. The top of the chamber is provided with gas chambers 5, 6, 7 which store a gasified fluid with thermal energy, and supplies gas to turbines 8, 9, 10. The turbines are connected to a shaft 12, and converted by a generator 13 into electrical energy. SELECTED DRAWING : Figure 1 COPYRIGHT : (C)2020, JPO&INPIT	Sudarshan K C	JP2019174023	2019/9/25
21	A marine refrigeration device	PROBLEM TO BE SOLVED : To provide a freezer for ship including a water cooling type condenser, which prevents damage of a cooling pipe of the condenser.SOLUTION : An air conditioner 10 is installed in a ship, and includes a refrigerant circuit 20 in which a compression mechanism 30, a water cooling type condenser 40, an expansion mechanism 50 and an evaporator 60 are sequentially connected, wherein provided are : an abnormal determination unit 81 configured to determine whether an amount of cooling water flowing in the condenser 40 is in an excessive abnormal state; and an abnormality-time operation unit 82 configured to perform predetermined abnormality-time operation to reduce the amount of cooling water flowing in the condenser 40, in a case where the abnormality determination unit 81 determines that it is in the abnormal state.SELECTED DRAWING : Figure 1	ダイキン工業株式会社	JP2015195097	2015/9/30

22	The floating tank structure, ship, floating facility, a float in the tank installation method, and, in the float tank maintenance method	PROBLEM TO BE SOLVED : To provide a tank structure of a floating body, a ship, a floating body facility, a tank installation method on a floating body, and a tank maintenance method on a floating body in which a fluid in a tank does not directly contact a ship hull structure in the floating body such as a ship such as a tanker or such as the floating facility called as FPSO or FLNG and a cargo pump can be eliminated.SOLUTION : A tank structure which is arranged in a tank space A of a floating structure 10 of a floating body 1 which is a ship or a floating facility comprises a transfer piping 32 which can be folded or expanded and shrunk, and can transfer a fluid between inside and outside of the piping, and the tank structure comprises a maximum tank capacity of 2000 mor more and 200, 000 mor less. One or plural sealed state bag-state tanks 31 whose whole periphery is surrounded, are arranged in the tank space A formed on the structure of the floating structure 10.SELECTED DRAWING : Figure 1	三井海洋開発株式会社	JP2015251436	2015/12/24
23	DESALINATION AND TEMPERATURE DIFFERENCE POWER GENERATION SYSTEM	PROBLEM TO BE SOLVED : To provide desalination and a temperature difference power generation system in which effective utilization of energy of a temperature difference is achieved, and thereby the performance of the whole system can be increased. SOLUTION : Multiple steam power cycle sections to obtain power for power generation are provided by changing the phase of a working fluid. An evaporator 11 of one steam power cycle section 10 is provided in which the steam obtained by vaporizing warm sea water using evaporation means in a seawater desalination plant 60 is supplied as a high temperature fluid. Also, an evaporator 21 in the other steam power cycle section 20 is provided in which the residual seawater being not evaporated in the evaporation means is supplied as a high temperature fluid. One steam power cycle section 10 makes a hybrid cycle because each working fluid is evaporated. Alternatively, the other steam power cycle section 20 makes a closed cycle. Accordingly, the heat loss of the high temperature fluid side is suppressed in the other steam power cycle section 20, and the effectively available heat can be secured. Additionally, the deoxygenated residual seawater is used, and thereby a state where a creature stain is hard to occur in the evaporator 21 can be obtained. SELECTED DRAWING : Figure 1 	SAGA UNIV; XENESYS INC	JP2018161843	2018/8/30

24	Ocean thermal energy conversion system for continuous reinforced cold water pipe	A continuous reinforced cold water pipe (CWP) for an Ocean Thermal Energy Conversion (OTEC) system is formed from a sequential series of molded pipe sections, which are formed from a series of rigid frame sections and a curable material to form the continuous reinforced CWP. Each molded pipe section is formed by moving a rigid frame section into a mold, enclosing at least a portion of the rigid frame section in the curable material, and curing the curable material. As each molded pipe section is moved out of the mold, the next sequential rigid frame section, which is connected to the previous rigid frame section, is moved into the mold. The cycle is repeated as many times as required to form the continuous reinforced CWP having a desired length.	LOCKHEED MARTIN CORPORATION	JP2019555739	2017/12/27
25	COOLING SYSTEM FOR CENTRAL FRESH WATER OF MARINE VESSEL	PROBLEM TO BE SOLVED : To adjust a discharge quantity of a sea water pump according to a load of cooled equipment and to reduce power of the sea water pump. SOLUTION : According to a cooling system for central fresh water of a marine vessel, a discharge quantity of a sea water pump 5 is controlled by control means 11 so that a temperature difference between a temperature of fresh water after heat exchanging thereof with sea water by a heat exchanger 2 and a temperature of taken-in sea water becomes a set temperature difference. Herein, when load of cooled equipment 1 becomes lower than a set maximum load (for example, 100%), the temperature of fresh water becomes lower than the temperature of fresh water when the cooled equipment 1 has the set maximum load, and a temperature difference between the temperature of fresh water and the temperature of sea water becomes smaller than the set temperature difference. Consequently, a discharge quantity of the sea water pump 5 is controlled so that the temperature of fresh water rises and the temperature difference becomes the set temperature difference, and the discharge quantity of the sea water pump 5 can be lowered than a set maximum discharge quantity (for example, 100%). SELECTED DRAWING : Figure 1 	SUMITOMO HEAVY INDUSTRIES MARINE ENGINEERING CO LTD	JP2016172091	2016/9/2

26	Ocean thermal energy conversion power plant	An offshore power generation structure comprising a submerged portion having a first deck portion comprising an integral multi-stage evaporator system, a second deck portion comprising an integral multi-stage condensing system, a third deck portion housing power generation equipment, cold water pipe; and a cold water pipe connection.	ジ アベル ファウンデーション インコーポレイテッド	JP2012550166	2011/1/21
27	The datacenter submerged	The subject disclosure is directed towards a submerged datacenter, which may be made up of modules, into a body of water such as the ocean. The submersion facilitates cooling of the datacenter as well as providing protection of the datacenter from environmental conditions that exist at or near the surface. Power may be generated from the datacenter heat, and power generated by or near the body of water (e.g., via waves, tides, wind, currents, temperature differences) may be used to help power the datacenter.	マイクロソフト テクノロジー ライセンシング エルエルシー	JP2016570865	2015/6/26
28	UNDERWATER ENERGY HARVESTING DRONE AND METHOD FOR OPERATION	PROBLEM TO BE SOLVED : To provide an underwater energy harvesting drone and a method for operation. SOLUTION : An underwater energy harvesting drone has a primary hull to be submersibly received in ocean water and a plurality of thermoelectric modules, each module of the plurality of thermoelectric modules having a first operational interface in thermal contact with the primary hull. A thermal transfer element is in contact with a second operational interface on the plurality of thermoelectric modules and an electrical power storage device is connected to the plurality of thermoelectric modules. Positioning of the submersible primary hull to create a thermal gradient between the primary hull and the thermal transfer element induces electrical power generation by the thermoelectric modules thereby charging the electrical power storage device. SELECTED DRAWING : Figure 3	The Boeing Company	JP2018217215	2018/11/20

29	In ocean engineering of the engine exhaust gas cleaning and clean sea water is used for zero energy consumption method and equipment	The present invention provides a process of using seawater to scrub and clean exhaust gas of engine in ocean engineering with zero energy consumption, comprising steps of leading the exhaust gas of engine into a scrubbing tower (1) of a scrubbing and cleaning system, pumping seawater into the scrubbing tower (1) with a seawater pump (2), scrubbing the exhaust gas of engine with the seawater in the scrubbing tower (1), and discharging clean exhaust gas and scrubbing seawater out of the scrubbing and cleaning system after scrubbing, wherein a step of recycling thermal energy of the scrubbing seawater is carried out before the scrubbing seawater is discharged out of the scrubbing and cleaning system, and in the step of recycling thermal energy, the thermal energy of the scrubbing seawater is recycled and used as the power of the seawater pump (2). In the process, the unused heat of exhaust gas of engine is recycled, and the heat recovery efficiency is high. An equipment of using seawater to scrub and clean exhaust gas of engine in ocean engineering with zero energy consumption for carrying out the process and the adopted semiconductor thermoelectric power generator are also provided.	彭斯干	JP2018556939	2016/5/9
30	Determining whether the device is quenched by a liquefied gas, a liquefied gas storage tank, and a liquefied gas in a liquefied gas transport ship rapid determination	In the present invention, a control device (30) includes a first temperature detection unit (31) that detects a partition wall temperature (T1) of a tank body where liquefied gas is housed, and a second temperature detection unit (32) that detects a temperature (T2) of a skirt supporting the tank body. The control device (30) further includes a temperature difference acquisition unit (33) that acquires a temperature difference (” T) between the partition wall temperature (T1) detected by the first temperature detection unit (31) and the temperature (T2) of the skirt detected by the second temperature detection unit (32), and a determination unit (34) that determines whether it is possible to rapidly cool a joining part of the tank body and the skirt with liquefied gas on the basis of the partition wall temperature (T1) and the temperature difference (” T).	三菱造船株式会社	JP2016097769	2016/5/16

31	The spiral heat exchanger tube bundle oncology	A heat exchanger comprising helically wound tube bundles is disclosed. The helically wound tube bundles are joined with tube sheets to define a primary working fluid system that is fluidically isolated from a secondary working fluid system. The tube sheets and tubes are formed of the same material, which facilitates their joining by means of joints that are substantially galvanic corrosion-resistant joints.	ロッキード マーティン コーポレーション	JP2016251258	2016/12/26
32	FUEL VOLATILE GAS DISCHARGE BANKER STATION STRUCTURE OF GAS FUEL SHIP	PROBLEM TO BE SOLVED : To provide a fuel volatile gas discharge banker station structure in a gas fuel ship, in which a volatile gas such as a fuel LNG or the like is not remained at a ceiling part, with respect a banker station ceiling having a semi-closed structure of a cross section recess shape in a freeboard side outer plate. SOLUTION : A fuel volatile gas discharge banker station structure of a gas fuel ship has : a banker station in which a part of a ship hull has a cross section recess-shaped semi-closed opening; a relief pipe for a volatile fuel gas generated in the banker station, which is located between ship refining parts which are exposed to a ceiling of the banker station; and a volatile fuel gas pipe line which is joined to the volatile fuel gas relief pipe, and is connected to a volatile gas discharge hole provided in a ship side outer plate. SELECTED DRAWING : Figure 2 COPYRIGHT : (C)2019, JPO&INPIT	SHIN KURUSHIMA DOCKYARD CO LTD	JP2017208090	2017/10/27
33	DEEP WATER TEMPERATURE DIFFERENCE POWER GENERATION DEVICE	PROBLEM TO BE SOLVED : To provide a deep water temperature difference power generation device that pumps up deep water with small energy but can generate large electrical power. SOLUTION : A deep water temperature difference power generation device includes a large-cylindrical deep water-intake structure including a large inner-outer diameter in an upper part of the one end thereof, an upper air discharge opening for discharging an upper air layer and air of the upper air layer and a water discharge opening at a water surface. The deep water temperature difference power generation device pumps up deep water with small energy and can generate large electrical power with a large-sized inside rotary member that rotates with a flow of a working gas. SELECTED DRAWING : None COPYRIGHT : (C)2019, JPO&INPIT	TSUJIMOTO YOSHINORI	JP2018017800	2018/2/5

34	POWER GENERATION SYSTEM FOR FLOATING BODY STRUCTURE, POWER GENERATION METHOD IN FLOATING BODY STRUCTURE, AND PIPING FOR POWER GENERATION	PROBLEM TO BE SOLVED : To provide a power generation system for a floating body structure, a power generation method in a floating body structure, and piping for power generation, which can obtain electrical energy from thermal energy by generating electricity using a thermoelectric conversion element that generates electricity using the temperature difference due to the Seebeck effect, in the piping that transports a low temperature material and/or a high temperature material which can be used in a floating body structure such as a ship by using one or both of them. SOLUTION : A floating body structure provided with a power generation pipe 10 for passing a fluid F to be transferred from low temperature to high temperature or from high temperature to low temperature generates electricity by flowing the fluid F into a first flow passage 11a inside the power generation pipe 10, using a thermoelectric conversion element 20 provided in the power generation pipe 10, and using the temperature difference between the fluid F and an external A in a floating body structure that generates electricity using heat transfer between the fluid F and the external A in the power generation pipe 10. SELECTED DRAWING : Figure 1 	MITSUI E S ZOSEN CO LTD	JP2017200152	2017/10/16
35	DEEP WATER TEMPERATURE DIFFERENCE POWER GENERATION APPARATUS	PROBLEM TO BE SOLVED : To provide a deep water temperature difference power generation apparatus capable of pumping up deep water with less energy and enabling large power generation. SOLUTION : A deep water intake structure has large inner and outer diameters at an upper part of one end; comprises an upper air layer, an upper air discharge opening configured to discharge air in the upper air layer, and a water discharge opening on a water level; and is formed into a large-sized cylindrical shape. The deep water intake structure can pump deep up water with less energy and enables large power generation using a large-sized inside rotary member, where the inside rotary member rotates with flow of working gas. SELECTED DRAWING : None 	TSUJIMOTO YOSHINORI	JP2017197453	2017/10/11

36	ETHANOL PRODUCTION SYSTEM	PROBLEM TO BE SOLVED : To reduce a production cost of ethanol. SOLUTION : An ethanol production system 100 includes a wave force power generating unit 11 making use of wave energy, a seawater desalination unit 13 making use of power generated in the wave force power generating unit 11, a carbonic water production unit 14 for producing carbonic water by dissolving carbon dioxide to fresh water produced in the seawater desalination unit 13, and an ethanol production unit 15 for catalytically producing ethanol from the carbonic water produced in the carbonic water production unit 14. SELECTED DRAWING : Figure 1 COPYRIGHT : (C)2019, JPO&INPIT	KYB CORP	JP2017156663	2017/8/14
37	Ocean thermal energy conversion and pipe connection	A method of assembling a pipe on a water-supported floating platform is provided. The platform includes an open central bay, and a gantry on the platform is arranged so as to surround at least a portion of the bay. The method includes providing a pipe intake assembly and staves on the platform; transferring the pipe intake assembly to the interior space of the bay; assembling the individual staves on the pipe intake assembly in an offset construction; lowering the pipe portion within the bay and into the water until the upper ends of the staves reside within a lower portion of the gantry; increasing the length of the pipe portion by assembling additional staves to the upper ends of the assembled staves; and repeating the step of increasing the length of the portion of the pipe until the pipe has a desired length.	ジ アベル ファウンデーション インコーポレイテッド	JP2015537013	2013/10/15
38	A flexible joint for large diameter pipe	A flexible connection for use between a vertical, large diameter cold water conveying pipe and a floating platform that supports the cold water conveying pipe or another pipe to permit the pipe and the platform to rotate in roll and pitch directions relative to one another without imposing excessive bending moments or strain on the cold water pipe. The flexible connection also contains internal and external pressure across the connection. The flexible connection includes an articulation mechanism that interconnects the vertical cold water conveying pipe and the platform or a pipe on the platform, and a flexible, fluid impermeable	ロッキード・マーチン・コーポレーション	JP2016500411	2014/2/26

39	Foldable structure	A foldable system is described. The system includes a panel consisting of at least two layers, a first flexible layer and a second non-flexible layer, the first and the second layer being attached to each other such that they form a whole, the panel including folds, the folds being applied in the second layer such that the panel can be folded into a predetermined shape. In addition, the first flexible layer includes material with a higher melting temperature than the melting temperature of the second layer.	オナク ビーブイビーエー	JP2018516793	2016/10/2
40	GAS COOLING SYSTEM	PROBLEM TO BE SOLVED : To efficiently cool gas introduced to a compressor. SOLUTION : A gas cooling system 100 includes : a gas flow passage for guiding gas G discharged from a storage tank 20 to a high-pressure injection type engine 10; at least two or more gas compression sections 40 for compressing the gas G; a gas cooling section 50 for cooling the gas G compressed by the gas compression sections 40; a thermoacoustic engine 60; a heating medium flow passage 70 for guiding a heating medium 71 that has collected waste heat from the high-pressure injection type engine 10 to a heater 62a of the thermoacoustic engine 60; and a refrigerant flow passage 80 for guiding a refrigerant 81 of which heat has been absorbed by a heat absorber 63a of the thermoacoustic engine 60 to the gas cooling section 50. SELECTED DRAWING : Figure 1 COPYRIGHT : (C)2018, JPO&INPIT	OSAKA GAS CO LTD	JP2017048686	2017/3/14
41	New gas turbine and method for operating the multi-loop ·	The present disclosure relates to a novel gas turbine system having applications, for example, in thermal power generation in an environmentally friendly manner. The multiloop gas turbine system may have multiple functional units each comprising a compressor, a regenerator, a combustion unit, and a turbine. Typically, exhaust flow of a turbine of a preceding loop may be routed to the combustion unit of the next loop, allowing mixing of exhaust flow with hot compressed air of the next loop, and the expanded exhaust from the turbine of the ultimate loop is fed back into the regenerators of each loop to recover exhaust heat.	NOSTRUM ENERGY PTE LTD	JP2018505549	2016/4/16

42	Deep water temperature difference power generating device	PROBLEM TO BE SOLVED : To provide a deep water temperature difference power generation "Tsunami" countermeasure chain-like annular fishery floating island attaining superior fishing ground by upwelling deep water at an exclusive economy region in Japan at a new deep water temperature difference power generation floating fishing bank including the deep water temperature difference power generation floating fishing bank and the annular fishery floating island is connected by a connecting member.SOLUTION : This invention relates to a deep water temperature difference power generation annular fishery floating island and a deep water temperature difference power generation "Tsunami" countermeasure chain-like annular fishery floating island showing a feature that the stored deep water is discharged by electrical power of natural energy out of a water discharging opening of a deep water taking means comprising a deep water storing tank having a large inner/outer diameter at an upper part of one end and including an upper part air discharging opening and a water surface water discharging opening and a riser pipe including the deep water taking opening at the other end at a lower part of the deep water storing tank so as to take the deep water through the riser pipe and comprising the deep water temperature difference power generation fishery floating island.SELECTED DRAWING : None	辻本 嘉義	JP2016241816	2016/12/14
43	A load adjustment device for a revolving door type and marine energy generator	A rolling-door-type load regulating device and an ocean energy power generating device using the same are described herein. The rolling-door-type load regulating device includes a water guiding unit, a roller spindle, and a driver. The water guiding unit includes at least two water guiding plates connected in parallel. The roller spindle is fixed to one end of the water guiding unit. The driver is connected with the roller spindle and drives the roller spindle to rotate to spread or retract the water guiding unit. The rolling-door-type load regulating device in the invention can regulate the load suffered by the hydraulic turbine. Therefore, the power generated by the ocean energy power generating device can be stably output and be directly used, thereby solving the problem that the output power of the conventional ocean energy power generator has wide fluctuations and poor stability.	杭州林黄丁新能源研究院有限公司	JP2016544522	2014/3/4

44	For ship and ship the thermoelectric power generation system	PROBLEM TO BE SOLVED : To provide a ship thermoelectric power generation system and a ship that are capable of adjusting a surface temperature of a high-temperature part of a thermoelectric conversion element to an appropriate temperature in order to maintain stable and long term power generation operation.SOLUTION : A ship thermoelectric power generation system according to the present invention comprises : an exhaust gas path 20 through which exhaust gas discharged from an internal combustion engine 10 of a ship 1 passes; a cooling water path 30 through which cooling water for cooling the internal combustion engine 10 passes; mixture means 21 for injecting the cooling water to reduce a temperature of the exhaust gas, the mixture means being provided on the exhaust gas path 20; thermoelectric power generation means 40 for generating power by receiving heat from the exhaust gas path 20 at a high-temperature part and discharging heat to the cooling water path 30 at a low-temperature part, the thermoelectric power generation means being provided on the upstream side of the mixture means 21; mixer means 50 for mixing the cooling water to the exhaust gas into the exhaust gas path 20, the mixer means being provided on the upstream side of the thermoelectric power generation means 40; and temperature control means 61 for adjusting the cooling water supplied by the mixer means 50 to control the temperature at the high-temperature part.SELECTED DRAWING : Figure 1	国立研究開発法人 海上・港湾・航空技術研究所; 第三舶用工業株式会社	JP2017051446	2017/3/16
45	Ocean thermal energy conversion power plant	An offshore power generation structure comprising a submerged portion having a first deck portion comprising an integral multi-stage evaporator system, a second deck portion comprising an integral multi-stage condensing system, a third deck portion housing power generation equipment, cold water pipe; and a cold water pipe connection.	ジ アベル ファウンデーション インコーポレイテッド	JP2015540906	2013/11/7

46	USE OF MAGNETIC PHASE TRANSITION FOR ENHANCEMENT OF ELECTROMAGNET	PROBLEM TO BE SOLVED : To achieve a suitable method for reducing a risk of initiating land mines and sea mines in water during marine sweeping work using a land mine countermeasure vessel (MCMV) itself, which is a vessel of a type searching for land mines and sea mines and designed for destruction thereof as necessary. SOLUTION : An electromagnet is used to give a magnetic field controlled to remove land mines. The electromagnet is constituted of a material with a curie temperature and stored at a higher temperature than the curie temperature; however, in use thereof, is arranged at a lower temperature than the curie temperature. SELECTED DRAWING : None COPYRIGHT : (C)2018, JPO&INPIT	THALES UK PLC	JP2017094722	2017/5/11
47	Power distribution system	PROBLEM TO BE SOLVED : To realize reduction of power loss and harmonic waves, in a power distribution system of an electric propulsion ship including a multiplex rectifier having a number of converted phases exceeding 12. SOLUTION : A power distribution system includes n sets of distribution board bus bars connected annularly or radially by coupling lines, a generator for feeding power to at least 1 set of the n sets of distribution board bus bars, a multiplex rectifier connected with the respective n sets of distribution board bus bars by wires, and performing multiplex rectification of three-phase AC voltages supplied from the n sets of distribution board bus bars in parallel, and a phase-shifting transformer performing phase shift between the distribution board bus bars, so that each phase of the n sets of distribution board bus bar voltages is shifted by 60/n° (n is an integer of 3 or more). SELECTED DRAWING : Figure 1 COPYRIGHT : (C)2018, JPO&INPIT	KAWASAKI HEAVY IND LTD	JP2016155603	2016/8/8

48	"HIGH TEMPERATURE SIDE HEAT SOURCE AUXILIARY DEVICE" FOR REDUCING ELECTRIC POWER GENERATION COST OF OCEAN TEMPERATURE DIFFERENCE ELECTRIC POWER GENERATION	PROBLEM TO BE SOLVED : To reduce an electric power generation cost of OTEC.SOLUTION : An electric power generation cost can be reduced by increasing exergy and utilizing a property of a heat medium. When a sea level is used as a high temperature side heat source auxiliary device, a floating body type solar pond is provided and, when a land is used as the high temperature side heat source auxiliary device, a non-light condensing heat collection system is provided. In an electric power generation device, a Kalina cycle machine (using ammonia/water heat medium) is preferably used from a temperature zone of a heat source. In the case of an output of 1, 000, 000 kW, for example, when the high-performance Kalina cycle machine is used, an electric power generation cost is calculated to be 9.9 yen/kWh according to OTEC method, on the other hand, in the case of using the non-light condensing heat collection system, the electric power generation cost is calculated to be 4.7 yen/kWh, and in the case of using the floating body type solar pond, the electric power generation cost is calculated to be 4.4 yen/kWh (under conditions of Kume Island).SELECTED DRAWING : Figure 1COPYRIGHT : (C)2018, JPO&INPIT	HOTSUMA KOBO KK	JP2016161548	2016/8/3
49	Ocean thermal energy conversion power plant connected to a cold water pipe	An offshore structure for use with an OTEC system includes a submerged spar having a lower portion having a cold water intake. The cold water intake includes a domed terminus in fluid communication with a cold water pipe. A dry machinery space adjacent the cold water intake includes one or more cold water supply pumps and one or more cold water pipe lifting and retention winches having a lifting cable connected to the cold water pipe.	Zia Bell Foundation Inc512190918	JP2014526171	2012/8/15

50	In the storage and transportation of natural gas in liquid solvents and method	Systems and methods to create and store a liquid phase mix of natural gas absorbed in light-hydrocarbon solvents under temperatures and pressures that facilitate improved volumetric ratios of the stored natural gas as compared to CNG and PLNG at the same temperatures and pressures of less than −80° to about −120° F. and about 300 psig to about 900 psig. Preferred solvents include ethane, propane and butane, and natural gas liquid (NGL) and liquid pressurized gas (LPG) solvents. Systems and methods for receiving raw production or semi-conditioned natural gas, conditioning the gas, producing a liquid phase mix of natural gas absorbed in a light-hydrocarbon solvent, and transporting the mix to a market where pipeline quality gas or fractionated products are delivered in a manner utilizing less energy than CNG, PLNG or LNG systems with better cargo-mass to containment-mass ratio for the natural gas component than CNG systems.	シーワン ホールディングス エルエルシー	JP2013533981	2011/10/12
51	A water pipe and a water pipe and a water pipe with a modular sections of such sections with ocean thermal energy system such	The invention relates to a modular water pipe section (114) including a deformable diaphragm (130) capable of encompassing, in an operational state of the section, a tubular space (132) defining an axial direction (AA') for carrying water and a series (135) of rings (120, 140) extending along the axial direction (AA') within the tubular space (132) and including : two end rings (120), each being at a separate end (116, 118) of the section (114) in the axial direction (AA'), the diaphragm (130) being attached to the end rings (120); at least one central ring (140) arranged between both end rings (120); and cables (150, 160) connecting each ring (120, 140) to the nearest ring (120, 140) in the axial direction (AA').	デ・セ・エヌ・エス	JP2016550490	2015/2/6

52	For ship and ship the thermoelectric power generation system	PROBLEM TO BE SOLVED : To provide a marine thermoelectric power generation system and a ship which are capable of adjusting the surface temperature of a high-temperature part of a thermoelectric conversion element to an appropriate temperature for keeping long-term stable power generating operation.SOLUTION : The marine thermoelectric power generation system comprises : an exhaust gas passage 20 through which exhaust gas discharged from an internal combustion engine 10 of a ship 1 passes; a cooling water passage 30 through which cooling water for cooling the internal combustion engine 10 passes; thermoelectric power generation means 40 for generating power by receiving heat from the exhaust gas passage 20 at a high-temperature part and discharging the heat to the cooling water passage 30 at a low-temperature part; mixer means 50 for mixing the cooling water into the exhaust gas in the exhaust gas passage 20; and temperature control means 61 for controlling the temperature at the high-temperature part by adjusting the cooling water supplied by the mixer means 50.	国立研究開発法人 海上・港湾・航空技術研究所; 第三舶用工業株式会社	JP2013070581	2013/3/28

53	High efficiency steam ejector pump ocean temperature difference power generating system is applied to operating part liquid - {(OTEC) applying a liquid-to-vapor ejector and a motive pump High-to-efficiency ocean thermal energy conversion}	There is provided a high efficiency ocean thermal difference power generating system by using liquid-vapor ejector and motive pump comprising : an evaporator for changing transferred refrigerant liquid into refrigerant vapor with high temperature and high pressure by the thermal exchange with surface seawater; a vapor-liquid divider which is installed at the outlet part of the evaporator and divides the refrigerants to liquid-state refrigerant and vapor-state refrigerant respectively; a distributor which is installed at the inlet of the evaporator and distributes the refrigerants flowed into the evaporator to multi-paths; a turbine for generating electric power by using the high pressure refrigerant vapor transferred from the liquid-vapor divider or the evaporator; a motive pump for increasing the pressure of the refrigerant liquid distributed from the distributor or the liquid-vapor divider; a liquid-vapor ejector for mixing the low pressure refrigerant vapor which passed the turbine and the high pressure refrigerant liquid which passed a motive pump, thereby proceeding expansion and compression; a condenser for condensing the refrigerants which was mixed in the liquid-vapor ejector by the thermal exchange with deep seawater; and a refrigerant circulation pump for increasing the pressure of the refrigerants which was condensed in the condenser up to the evaporation pressure and for circulating.	コリア インスティチュート オブ オーシャン サイエンス アンド テクノロジー	JP2016564936	2015/3/5
54	The thermal energy system and the thermal energy system and method of operation	The present invention relates to a thermal energy system (1) that includes at least one exchanger module (100, 200, 300) that includes at least one heat exchanger (110a, 110b, 210a, 210b, 310a, 310b), in particular two heat exchangers, each module including at least a first circuit (140a, 140b, 240a, 240b, 340a, 340b) for a first fluid traversing, in a regular mode of operation, through the heat exchanger in a main flow direction, a second circuit for a second fluid for exchanging thermal energy between the first fluid and the second fluid, and at least one pump (160, 260, 360) including a fluid drive device (162, 262, 362) for driving the first fluid in the main flow direction, characterised in that the drive device is arranged, along the main flow direction, upstream of the heat exchanger. In addition, the invention relates to the application of such a system in ocean thermal energy conversion systems.	デ・セ・エヌ・エス	JP2014517675	2012/6/27

55	Ocean thermal energy conversion method and system with improved	The invention is an ocean thermal energy conversion method and a system in which a motive fluid having predetermined characteristics is circulated in a closed loop between a cold source in cold deep ocean water and heat sources in warm surface water. The motive fluid is compressed between the cold source and a first primary warm water heat source resulting in the motive fluid being substantially totally vaporized at an outlet of the warm water heat source. The motive fluid is heated downstream from the primary heat source by a secondary heat source. The thermal energy of the heated motive fluid is recovered from a turbine and the motive fluid is condensed in the cold source.	IFP ENERGIES NOUVELLES	JP2014533956	2012/9/11
56	The temperature differential energy conversion device	The purpose of the present invention is to improve the cooling efficiency of a gas introduced into a container to enable energy to be converted without using cold air. The present invention is provided with a container (10) which has a tubular side wall and a lower wall, and into which a liquid (W) for cooling is placed. An upper opening (20) for taking in a gas is provided in the upper side of the container (10), and a lower opening (21) centered about a center axis (P) of the container (10) is provided in the middle of the lower wall of the container (10). In the upper side of the container (10) is provided a fan mechanism (40) that takes the gas in from the upper opening (20), compresses the gas and moves the gas down while swirling some or all of the gas as a working gas (G), forms the internal liquid (W) into a liquid wall section (H) having a funnel-shaped inner surface in which the lower opening (21) is opened, and causes the working gas (G) to be drawn out through the lower opening (21). A turbine (T) is provided, and the turbine (T) faces the lower opening (21) and is coaxial with the center axis (P) of the container (10). The turbine (T) is rotated by the working gas (G) that is being drawn out, and motive power is produced by the turbine (T).	阿部 俊廣	JP2015237205	2015/12/4
57	A floating type maritime structure of insulating system	Disclosed herein is a heat insulating system of a floating structure, and more particularly, a heat insulating system of a floating structure in which a heat insulating material is provided at at least one of a ballast tank, a trunk deck space, and a side passage way contacting the trunk deck to decrease a boil-off rate (BOR) occurring due to a heat transfer from an external region of a hull into an LNG storage tank.	デウ シップビルディング アンド マリーン エンジニアリング カンパニー リミテッド	JP2016529707	2014/7/22

58	Buoy	PROBLEM TO BE SOLVED : To provide a buoy capable of obtaining sufficient power by thermoelectric generation.SOLUTION : The buoy comprises : a chamber 3 provided with a first portion 4 and a second portion 7 each thermally connected to water and atmospheric air, the internal pressure of the chamber 3 being reduced; a thermoelectric element 18 thermally connected inside the chamber 3 to each of the first portion 4 and the second portion 7; first and second rechargeable batteries 21, 22 to which a first power P1 output from the thermoelectric element 18 is charged; a processing unit 30 driven by a second power P2 output from the first rechargeable battery 21; a heating wire 23 disposed inside the chamber 3 and caused to generate heat by a third power P3 output from the second rechargeable battery 22; and a first control unit 31 for charging the second rechargeable battery 22 with the first power P1 when a voltage Vof the first rechargeable battery 21 is higher than or equal to a first prescribed voltage V, and stopping supply of the first power P1 to the second rechargeable battery 22 when the voltage Vis lower than the first prescribed voltage V.	富士通株式会社	JP2012264121	2012/12/3
59	Two-phase flow is caused by the motion of a maximum amount of two-phase expansion device	A two-phase expansion device (106) capable of maximizing the amount of movement produced by a two-phase flow. The two-phase expansion device (106) includes at least : one dispenser (105) for dispensing the fluid to a plurality of two-phase expansion nozzles (60); a plurality of adjacent two-phase expansion nozzles (60) with substantially parallel axes, each two-phase expansion nozzle (60) including sequentially at least one diffuser (65), one neck (66), and one tube (67), the two-phase expansion nozzles (60) being arranged to each receive a portion of the flow from the hot source; and elements for supporting the plurality of two-phase expansion nozzles (60) and including elements for sealably separating the two-phase expansion nozzles (60).	ストレワット	JP2016524876	2014/7/9

60	The temperature differential energy conversion device	According to the present invention, warm air guided into a tubular body can be cooled as reliably and quickly as possible, and turbine output is improved. A temperature-difference energy conversion device is provided with a funnel-shaped tubular body (10) having a top opening (11) and a bottom opening (12), and is configured such that warm air is guided in through the top opening (11) of the tubular body (10) and moved toward the bottom opening (12) while swirling, cold air is jetted into the tubular body (10) and mixed with the warm air, the mixed air is guided out through the bottom opening (12) of the tubular body (10), a turbine (T) is placed in either an inlet channel (Ra) for guiding in warm air or an outlet channel (Rb) for guiding out mixed air, and motive power is derived from the turbine (T); the energy conversion device is also provided with numerous small cold-air holes (N) for blowing in cold air along an inner wall surface leading from the top opening (11) side of the tubular body (10) to the bottom opening (12) side.	ABE TOSHIHIRO	JP2014242788	2014/12/1
61	Friction surface agitation treatment	A process is described that employs what can be termed a friction surface stirring (FSS) process on the surface of a metal object. The FSS process occurs on some or the entire surface of the metal object, at a location(s) separate from a friction stir welded joint. The FSS process on the surface produces a corrosion resistant mechanical conversion “coating” on the object. The “coating” is formed by the thickness of the material of the object that has been FSS processed. In one exemplary application, the process can be applied to a metal strip that is later formed into a tube whereby the “coated” surface resides on the inside of the tube making it highly resistant to corrosive flow such as seawater.	Lockheed Martin Corporation504242618	JP2016500870	2014/3/7

62	OTEC system for cooling the working fluid pump motor and method	A cooling system and process in an OTEC system are described where the sub-cooled working liquid from the working fluid pump outlet is used to cool the working fluid pump motor, either directly or indirectly via heat exchange with a secondary fluid. The heat from the motor that is being rejected into the working fluid just prior to the working fluid flowing to the evaporator helps to alleviate heat duty in the evaporator meaning more potential for the evaporator to create energy. Also, because two-phase evaporators, such as those in an OTEC system, are less efficient than single-phase heat exchangers at single-phase heating, this pre-heating of the working fluid will help the evaporator performance substantially.	Lockheed Martin Corporation504242618	JP2016500866	2014/3/7
63	Absorption cooling device, heat exchanger	PROBLEM TO BE SOLVED : To substantially reduce the cost of a heat exchanger, and to improve the performance of a heat exchanger of a large capacity to recover electric energy from seawater low in temperature difference by ocean thermal power generation. SOLUTION : A heating pipe (heating tube) is horizontally disposed and received in an absorption cooler and an ammonia water liquid tank of a system where ammonia water flows down along an outer face of a cooling pipe (cooling tube), an evaporator for boiling and evaporating the ammonia water is applied to utilize absorbing/evaporating properties of the ammonia water in maximum, a plastic tube is applied in a shell and a tube type heat exchanger, all of the tubes are constantly kept in tensed states, thus the tubes can be aligned, and mass production and low cost can be achieved. COPYRIGHT : (C)2010, JPO&INPIT	Masahisa Fujimoto501258034	JP2009094393	2009/3/16
64	Water supply system	An apparatus, system, and method for raising water using containers is provided. The system includes a first frame ascendable and descendible within a body of water. At least one container is connected to an elongated cable, wherein the elongated cable is connected to the first frame, wherein two free ends of the elongated cable are connectable together when the first frame is in a descended position within the body of water. The system may include an Ocean Thermal Energy Conversion (OTEC), Low-Temperature Thermal Desalination (LLTD), and/or Seawater Air Conditioning (SWAC) system, among others.	Douglas Edwards513242405	JP2015546086	2013/12/6

65	Industrial ocean thermal energy conversion process	A combined OTEC and steam system having an OTEC power generation system including a multistage condensing system in fluid communication with a cold water system and a steam system comprising a steam condenser, wherein the steam condenser is in fluid communication with the cold water system.	Zia Bell Foundation Inc512190918	JP2013519829	2011/7/14
66	Suction pipe for pumping cold ocean thermal	A pipe for drawing up cold water for a marine thermal energy plant is produced from a composite material including glass fiber reinforcements and a thermosetting resin.	De profile NA BROAD511093144	JP2013501899	2011/3/24
67	IMPROVED SOLAR HEAT POWER GENERATION AND IMPROVED HIGH-TEMPERATURE ROCK POWER GENERATION	PROBLEM TO BE SOLVED : To attain reduction (3-4 yen/kWh at a power transmission end) and supply power (output of several ten million kW or more) required for power generation cost. SOLUTION : Power generation efficiency is improved while ocean deep water is utilized to suppress a high temperature side heat source temperature, and thereby the specification of a solar heat power generation device is improved and also power generation cost is reduced. A power generation amount is inexhaustible if there is a sufficient heat collection area regardless of its latitude. In high-temperature rock power generation, required temperature rise is attained during penetration and water passing into a high-temperature rock with arc-shaped propulsion, and thereby location limitation is reduced, a scale merit is obtained, and power generation cost is reduced.	HOTSUMA KOBO KK	JP2014010780	2014/1/7

68	The supporting structure for independent tank	A support structure (1) for an independent tank, comprising : tank-side support bases (2) disposed and affixed to the bottom surface (51) of the independent tank; ship body-side support bases (3) disposed and affixed to the bottom plate (91) in the tank housing space of a ship body; and heat insulating support members (4) disposed between the tank-side support bases (2) and the ship-body side support bases (3) and formed so that the heat insulating support members (4) can slide on either the tank-side support bases (2) and/or the ship-body side support bases (3). The bottom surface (51) of the independent tank is configured so that, due to a temperature difference, the bottom surface (51) radially expands and contracts about a point on the bottom surface (51), the point not being displaced relative to the bottom plate (91). Each of the tank-side support bases (2) and each of the ship-body side support bases (3) are provided with reinforcement members (22, 32) at the portions thereof which include an eccentric region (8) in which the center (P1) of load on the tank-side support base and the center (P2) of load on the ship body-side support base become eccentric to each other due to the expansion and contraction of the bottom surface (51).	Mitsubishi Heavy Industries Ltd6208	JP2010277282	2010/12/13
69	For deep water pumping plant for producing a rigid pipe	This plant for manufacturing a rigid pipe for drawing up deep water for a marine thermal energy plant is characterized in that it comprises a floating platform on which there is installed a continuous production device in the vertical axis of the pipe, including a first stage of winding webs of fibers impregnated with resin about a winding roll for the partial crosslinking thereof, said wall being formed by modular elements in the form of plates, which are connected together so as to form a strip that moves in a spiral and repeating in the upper part of the roll so as to form a winding surface for the webs.	De profile NA BROAD511093144	JP2013501901	2011/3/28

70	OFF-SHORE TEMPERATURE DIFFERENCE POWER GENERATING SYSTEM	PROBLEM TO BE SOLVED : To provide an off-shore temperature difference power generating system by reducing the consumption electric power to be consumed by a sea water pump, and by disposing a large-sized turbine generator stably on the stable land, so as to enlarge the size of a turbine generator utilizing the ocean deep water. SOLUTION : In a turbine generator utilizing ocean deep water, the water feeding pressure of a sea water pump can be lowered to reduce the electric power consumption by arranging a removable heat exchanger in the water of an off-shore area shallower than the depth of 50 m near the coast line. By disposing the turbine generator on the land, moreover, the size can be enlarged to reduce the generating cost.	YOSHIDA MINORU; WU HUI WEN	JP2013238811	2013/11/19
71	Cryogenic liquid transportation vessel and ocean thermal energy conversion device	PROBLEM TO BE SOLVED : To provide an ocean thermal energy conversion apparatus which can reduce a cost of the apparatus and stably give electric power without depending on ocean areas or seasons.SOLUTION : The ocean thermal energy conversion apparatus includes : a warm sea water pump that pumps up warm sea water from an ocean surface; a first heat exchanger phase-converting a liquid phase working fluid into a gas phase working fluid by heat exchange with warm sea water; a second heat exchanger converting warm sea water to cold sea water by heat exchange with an externally supplied cryogenic liquid; a turbine rotated and driven by the gas phase working fluid; a power generator axially coupled to the turbine; a third heat exchanger phase-converting the gas phase working fluid used for driving the turbine into a liquid phase working fluid by heat exchange with cold sea water; and a working fluid pump pressure-feeding the liquid phase working fluid obtained from the third heat exchanger to the first heat exchanger.	IHI Corporation99	JP2010279572	2010/12/15

72	SEESAW-SHAPED TEMPERATURE DIFFERENCE POWER GENERATOR	PROBLEM TO BE SOLVED : To provide a seesaw-shaped temperature difference power generator for generating power under utilization of temperature difference as one of new renewable energy sources. SOLUTION : This seesaw-shaped temperature difference power generator utilizing a thermodynamic cycle comprises at least a right-side tank 1 and a left-side tank 2 where low-boiling point hydraulic medium 12 kept under a state in a space filled with gas of lower pressure than atmospheric pressure is alternatively stored; a piping 3 connected to the right-side tank and the left-side tank and supported oscillatably at its neutral position; a power generating turbine 4 arranged at the piping and driven by gaseous medium in which the low-boiling point hydraulic medium is gasified; a power generator 5 for generating power by the power generating turbine; a first on-off valve 6 and a second on-off valve 7 arranged in the right-side and left-side tanks; a first directional valve 8 and a second directional valve 9 arranged between the power generating turbine and each of the right-side and left-side tanks; and a first container 10, a second container 11 for at least partially storing the right-side, left-side tanks to perform cooling and heating.	OKAMOTO MASAMORI	JP2013206876	2013/10/2

73	OCEAN DEEP BUOYANCY POWER GENERATION SYSTEM	PROBLEM TO BE SOLVED : To perform a stable power generating operation everyday with little emission of green house effect gas such as carbon dioxide or the like during a power generating process. SOLUTION : This invention relates to an ocean deep buoyancy power generation system comprising an inflow pipe 10; a guide pipe 30; a plurality of pumping-up units 40; a filling unit 50; a sea water force power generation and power collector 60 or an ocean temperature difference power generation and power collector 70; a first transfer device 91; and a second transfer device 92. Gas is filled in the pumping-up units by the filling unit so as to generate increased buoyancy, they are cooperated to displace sea water upwardly, they are released after the first transfer device moves the pumping-up units from above to above the guide pipe, then the pumping-up units show depression down to the second transfer device, the pumping-up units transfer from below the guide pipe into the inflow pipe by the second transfer device, gas is filled into the pumping-up units by the filling unit to cause sea water kept in the pumping-up pipe to be displaced upwardly to perform power generation under continuous cooperation work.	HSU KUO HUA	JP2014155701	2014/7/31
74	An ocean thermal energy conversion (SOTEC) supplemented by increasing the efficiency of the system	Internally reinforced structural composites, suitable uses for such composites, and associated methods of manufacturing are disclosed herein. In one embodiment, a method of making a reinforced structural component includes forming a precursor having a crystal structure with a plurality of lattice layers and exfoliating the precursor. As a result, a distance between adjacent pairs of the plurality of lattice layers is expanded. The method also includes wrapping the exfoliated precursor with a surface support material around at least a portion of a circumference of the individual lattice layers in the exfoliated precursor.	McAllister Technologies LLC511201174	JP2012526836	2010/8/16

75	Since the work output of the engine in a low temperature state, cooling, air and water by utilizing heat energy	A cold state engine utilizing air heat energy to output work, refrigeration and water, includes a first cycle and a second cycle. The first cycle comprises of vaporizer, expander, and working fluid pump. The second cycle includes a vaporizer, circulation pump, air heat exchanger. The two cycles are opera lively interconnected via at least a vaporizer, piping, valves, sensors and a generator. Using air or water as a high temperature heat source, an expander generates cryogenic liquid as a low temperature heat source, using natural gases (such as N2, He, Air, CO2 etc.) as a working fluid, based on methods of cryogenic working fluid thermodynamic-refrigeration cycle and frost-free two stage heat exchange cycle.	Liu Jason514059057	JP2014542270	2012/11/15
76	A thermal energy conversion device	A thermal energy conversion plant, wherein a pressurized liquefied working fluid gasifies in an evaporator unit located at the lower level of a closed-loop thermodynamic circuit, ascends through a widening ascending conduit to a condenser unit located at the upper level of said thermodynamic circuit, condenses and falls because gravity powering a power extraction apparatus, before entering back into the evaporator, and restarting the cycle. A much lighter pressuring gas could be optionally included in the widening ascending conduit.	Paya Diaz Gasupa Pablo514144722	JP2014546051	2012/12/6
77	Global warming of the earth energy for suppressing the outer releasing device	An apparatus for expelling energy away from the earth in order to suppress global warming of the present invention is characterized by comprising a first generator for converting kinetic energy such as solar energy entering into atmosphere of the earth, geothermal energy, energy consumed by humans and converted mainly into heat or light, or a current of air or ocean waves etc. into electrical energy, a heat pump operated by the electrical energy obtained from the first generator, a second generator for converting heat energy produced by the heat pump into electrical energy, and an oscillator for converting the electrical energy obtained from the second generator into electromagnetic wave and radiating the electromagnetic wave into the outer space.	Tuner Holdings Inc508051894	JP2009554277	2009/2/10

78	THERMOELECTRIC GENERATOR AND MARINE VESSEL WITH THE SAME	PROBLEM TO BE SOLVED : To provide a thermoelectric generator capable of efficiently recovering waste heat from an engine 25 for power generation as an electric energy in spite of a simple structure. SOLUTION : The thermoelectric generator 30 comprises : a pipeline 31 for flowing the exhaust gas; and a plurality of thermoelectric units 32 having plate-like thermoelectric modules 33 for generating power by temperature difference between a low temperature side and a high temperature side. Heat collection fins 46 provided on the high temperature side of each of thermoelectric modules 33 project in the pipeline 31. Each of heat collection fins 46 is heated by the exhaust gas. Non-liquid cooling type temperature control members 49 for suppressing heat transmission to high temperature sides of each of thermoelectric modules 33, are interposed between high temperature sides of each of thermoelectric modules 33 and heat collection fins 46. If a contact thermal resistance is well-known and its reproducibility is high, the temperature control member 49 easily adjusts a reachable temperature of the high temperature side of the thermoelectric module 33 during a design stage.	YANMAR CO LTD	JP2013071081	2013/3/29
79	THERMOELECTRIC GENERATOR AND MARINE VESSEL WITH THE SAME	PROBLEM TO BE SOLVED : To provide a thermoelectric generator capable of efficiently recovering waste heat from an engine 25 for power generation as an electric energy in spite of a simple structure. SOLUTION : The thermoelectric generator 30 comprises : a pipeline 31 for flowing the exhaust gas; and a plurality of thermoelectric units 32 having plate-like thermoelectric modules 33 for generating power by temperature difference between a low temperature side and a high temperature side. Heat collection fins 46 provided on the high temperature side of each of thermoelectric modules 33 project in the pipeline 31. Each of heat collection fins 46 is heated by the exhaust gas. Thermal insulation members 49 are interposed between high temperature sides of each of thermoelectric modules 33 and heat collection fins 46. The thermal insulation member 49 is formed of a stacked body that a plurality of metal plates, ceramics plates or a combination of those are stacked.	YANMAR CO LTD	JP2013071079	2013/3/29

80	MARINE HOT WATER POWER GENERATION SYSTEM	PROBLEM TO BE SOLVED : To achieve a thermal power generating system with sea bottom hot water being applied as a heat source. SOLUTION : In order to suppress development cost and construction cost, the upper-most part of a power generating system major constituent element is set at a low depth from a sea surface or below and an entire system is moored at the sea bottom part, influence of tide power, ocean current and weather or the like over the power generation system is made minimum. Also, in order to suppress the cost, marine space down to the sea bottom is effectively utilized to constitute a steam generation and condensate system having a simple pipe structure. In order to make influence such as corrosion by salt contained in hot water minimum, hot water steam is not sent directly to a power generation turbine, but a heat exchanger is used to heat another thermal medium. COPYRIGHT : (C)2014, JPO&INPIT	FUKUSHI KENJI	JP2012271819	2012/12/12
81	The desalination device barometric type with an open cycle ocean thermal energy conversion device	PROBLEM TO BE SOLVED : To provide a desalination device with superior efficiency by driving out noncondensable gas without using a conventional exhaust pump. SOLUTION : In this barometric type open cycle ocean temperature difference power generation device with the desalination device including : an evaporator into which surface warm sea water is introduced, for generating steam, and in which the introduced warm sea water is drained below sea level; a generator for generating power by a turbine blade being driven by the steam generated by the evaporator; and a condenser in which the steam after driving the turbine blade is introduced, in which deep cold sea water is introduced, for generating fresh water by condensing the steam, a bubble generating means for generating bubbles of noncondensable gas remaining after generating the fresh water during draining of the cold sea water by discharge from the condenser; and a discharging means for discharging the cold sea water and the bubbles in a gas-liquid mixture state to below sea level, are provided, wherein the noncondensable gas remaining after generating the fresh water is discharged without using the conventional exhaust pump. COPYRIGHT : (C)2011, JPO&INPIT	NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY301021533	JP2010055769	2010/3/12

82	MARINE RESOURCE COLLECTION SYSTEM	PROBLEM TO BE SOLVED : To provide a marine resource collection system. SOLUTION : A floating body 100 comprises : a collection facility 31 collecting a marine resource; power generating units 2, 3; a structure 70 for integrating them; a control part for performing mooring within a mooring sea area; and a GPS. The collection facility or the power generating unit includes : blades 11 receiving a wind; or propellers 12 in the sea. The structure includes : a ring 1 for connecting the collection facility and the power generating units; and mooring cables 13 for connecting the collection facility and the power generating units thereinside. The floating body is placed within the sea area in which prescribed power can be obtained even if the floating body moves against a wind vector, a sea current vector, or the sum of the wind vector and the sea current vector inside the sea area for a statistical prescribed time or a prescribed time on weather marine phenomenon prediction by power obtained by the power generating units. The control part controls whether or not the blades or the propellers of the power generating units receive the wind or the sea current by information from the weather marine phenomenon prediction and a wind direction anemometer, or a current direction current meter and the GPS to moor the floating body within the prescribed mooring sea area. 	OGASAWARA SEKKEI : KK	JP2012219349	2012/10/1
83	POWER GENERATOR	PROBLEM TO BE SOLVED : To perform an efficient conversion of natural energy into electrical energy. SOLUTION : Water has a weight of 800 times that of air. Sufficient utilization of this high density energy causes a scale of an energy acquisition facility to be small, so that a ship 21a having a wave pressure plate 22a2 for accepting wave in floats 11a1, 11a2 of an anchor means formed in a U-shape, a pole 12a2 and an anchor 14aPN or the like is mounted, it absorbs a wave height from the ocean to cause it to be moved up and down around a supporting pin 34a of the ship, this force is transmitted from a beam 24a of a stern to a pin 4aPN2 through a pin 4aPN1 and the like to cause it to be reciprocated and transmit it a power generator 90. 	SHIMONOHARA TAKESHIGE	JP2012195311	2012/9/5

84	A temperature difference generating system utilizing an ice layer	PROBLEM TO BE SOLVED : To provide a power generation system by temperature difference with inexpensive running costs and good power generation efficiency. SOLUTION : The power generation system by temperature difference includes a high-temperature portion located underground, a power generation facility installed on the ground, and a low-temperature portion installed at higher level than the power generation facility, wherein the high-temperature portion and the power generation facility are connected by a first conduit (10), and the power generation facility and the low-temperature portion are connected by a second conduit (12), and the low-temperature portio and the high-temperature portion are connected by a third conduit (14). The low-temperature portion is configured such that an ice layer is formed by filling water of several tens centimeters, and the third conduit (14) is caused to pass inside the ice layer with required thickness formed by repeating this operation. COPYRIGHT : (C)2010, JPO&INPIT	Dokon Inc594157418	JP2009065650	2009/3/18
85	Method and device for surfin	The present Invention provides a surfing device comprising at least one energy projecting means and at least one energy projecting structure for supporting and positioning the energy projecting means. The energy projecting structure positions the energy projecting means at one or more energy projecting positions. Energy is projected from the energy projecting means from positions to enable a person to surf at least partially solely via the projected energy. The present invention also provides a surface for a surfing device, either the device of the present Invention or another surfing device. The surface, is designed for a person to surf on either via the projected energy of the surfing device of the present Invention or by at least partially direct contact with the surface via fluid projected out of, over or upon it. The surface has an Impact absorption material. The material Is at (east partially porous and at least partially deformable and also designed to at least partially deform upon impact to at least partially absorb or diffuse the impact.	Kuritikosu Stefan Con513158092	JP2013544973	2011/12/21

86	Hot water energy and deep sea resource recovery system, hot water delivery system, and, the heat contained in the water resource	A system that utilizes the naturally superheated fluids available from hydrothermal vents to harness the almost limitless quantities of heat energy they contain. It consists of one major system that has three parts : (i) funnel, (ii) pipes, and (iii) any combination of several mechanical attachments. The recovered heat energy will then be used to drive steam turbines or other equipment for electricity generation, water desalination, or any other thermal energy use. It could also be simultaneously or separately fed into resource recovery equipment for the recovery of valuable metals, minerals, and chemicals without system modification.	Marshall Bruce Sea510011846	JP2010516969	2007/9/6

87	Environmentally friendly treatment device, the load adjustment device is mounted on a marine vessel, the sea for collecting waste, which can supply power islands area before processing and marine vessel for treating waste	The present invention provides a ship load adjusting device for adjusting the load of the ship by burning, by means of comprising a raw material storage portion for storing raw material and a collective/storage tank, which are symmetrically mounted on the front end of the ship with an incinerator at the middle, and provides a ship load adjustment device comprising : a first ballast, which is disposed at the raw material storage tank and at the lower portion of the ship, for storing sea water; a second ballast for storing sea water, which is disposed at the lower portion of the collection/storage tank storing ashes produced after burning the raw material in the raw material storage tank, and at the lower portion of the ship; a first control device for controlling the inflow/outflow of the sea water between the first ballast and the second ballast; a third ballast for storing sea water which allows the inflow/outflow of sea water according to the reduced amount of the raw material due to burning of the raw material; and a second control device for controlling the inflow/outflow of sea water in the third ballast. By providing the ship processing marine waste into a resource including the ship load adjustment device, the present invention can not only reduce the cost of land transportation required to process marine waste which is accumulated in the sea but also can effectively and fundamentally prevent environmental problems that occur in the process of transporting, because the marine waste is processed on the sea by the ship of the present invention. Also, the present invention can fundamentally resolve the secondary environmental problems, such as securing reclaimed land and soil pollution due to conventional burying of marine waste in the land, and transforms the problems of simply burying marine waste, which emits high heat, into creating energy by means of burning. In addition, by using the converted energy for sailing the ship to the locations where marine waste is	ハラ エンジニアリング アンド インダストリアル デベロップメント カンパニィ リミテッド	JP2013526985	2011/4/22

88	The sea marine waste removal, which can supply power islands area before processing and marine vessel for treating waste	The present invention relates to a ship for processing marine waste into a resource for collecting marine waste at sea, preprocessing, and supplying power to island regions, and provides a ship for processing marine waste into a resource comprising : A) a marine waste collection device for collecting marine waste which is accumulated on the coast into the ship; B) a first bunker, which is a storage tank for depositing the marine waste that is transported by the marine waste collection device, for preliminarily removing sea water substances in the marine waste which is transported; C) a crushing device for crushing the marine waste which is deposited in the first bunker; D) a sorting device for sorting by type the crushed marine waste which passes through the crushing device; E) a sorted product storage tank, which is a storage tank for storing by type the products through the sorting device according, including a sorted metal storage tank, a sorted non-metal storage tank, and sorted combustible product storage tank; F) a drying device for secondarily removing moisture from combustible products in the sorted combustible product storage tank; G) a second bunker for storing the sorted combustible products which are dried by the drying device; H) a first crane for dropping into an incinerator the combustible products which are deposited into the second bunker; I) the incinerator for creating a heat energy source by burning in the second bunker the sorted combustible products which are transported and dropped by the first crane; J) a collection/processing device for collecting and storage-processing the ashes of the sorted combustible products created from the incinerator; K) a boiler for using the heat energy source generated from the incinerator for power generation (and accumulation) for sailing the ship; L) a generator for producing power by means of the steam which is produced from the boiler; and M) a power transmission device including a power	ハラ エンジニアリング アンド インダストリアル デベロップメント カンパニィ リミテッド	JP2013526984	2011/4/22

89	Electro-mechanical energy conversion system for underwater	The stator (21), including both laminated core (32) and windings (33), is separately encapsulated in composites (25) or a polymer. A threaded pin (34) traverses end to end in a axial direction the laminated core (32) and the encapsulating material of the stator and traverses a nut (35) disposed in the encapsulating material. The threaded pin (34) attaches the stator to a stator and rotor support structure. The rotor (22) is separately protected by either encapsulating it in composites (25) or a polymer, or the magnets (26) of the rotor (22) are fixed on the back iron (27) and covered by a protective casing (28), or the magnets (26) have corrosion-proof surface and are additionally protected by special paint. A gap (23) between the stator (21) and the rotor (22) is open to surrounding fluid.	Are smart motor S508260832	JP2013518302	2011/7/5
90	For generating the electric energy to the electric energy generating facility ceanic	This offshore installation for producing electrical energy from thermal energy of the oceans includes a floating platform supporting a generator for producing electrical energy from the temperature difference of the water at the surface and at a depth and associated with a pipe for drawing up water from a depth, is characterized in that the pipe for drawing up water from a depth include three portions, including a first formed with a rigid pipe, the lower end of which is immersed at a great depth and the upper end of which is immersed in midwater at a reduced depth, a second portion formed with flexible pipes for connecting the upper end of this rigid suction pipe to a third portion forming a suction pipe, formed with rigid pumping pipes structuring a lattice of pipes attached under the platform.	De profile NA BROAD511093144	JP2013501907	2011/3/29
91	METHOD AND DEVICE FOR HIGHLY-EFFICIENTLY RECOVERING ORDINARY TEMPERATURE HEAT ENERGY	PROBLEM TO BE SOLVED : To more efficiently recover heat energy than a conventional heat engine from all heat sources of the ordinary temperature. SOLUTION : Though the conventional heat engine recovers the heat energy from a high heat source, exhausts heat to a low heat source, and in this process, converts some of the heat energy into kinetic energy and electric energy, a renewable energy recovery method more efficiently converts the heat energy into mechanical energy and the electric energy than the conventional heat engine, by recovering vaporization latent heat from the heat source of the ordinary temperature, converting it into the mechanical energy, and minimizing an increase in entropy in the process. 	NAGASHIMA KAZUHIKO	JP2011192100	2011/8/17

92	Ocean thermal energy conversion power plant intake system of submarine pipeline	PROBLEM TO BE SOLVED : To provide a water intake system of a sea-bed cold water pipe of an ocean thermal energy conversion power plant, which transports a large amount of low temperature sea water on a deep sea bottom so as to be supplied for a commercial power plant. SOLUTION : A cold water pipe 21 takes low temperature sea water having a cold water intake port 12 on a power plant ship 10 with one end being connected to the cold water intake port 12 and the other end extending to the sea bed, and includes : a water intake head 31 having a plurality of filtering holes in its surface and a fixed part on one end; a water intake pipe 41 in which one end thereof is connected to the water intake head 31, a plurality of compound pipes 42 are connected to each other in series, each compound pipe 42 has a plurality of corrugated inner pipes arrayed in order to form a tubular mode, inner and outer edge of walls are covered by non-permeable cloth, both ends have connection parts, and a plurality of connection holes corresponding to each corrugated inner pipe are opened in each connection part; and a connection pipe in which an outer pipe 52 and an inner pipe 53 are joined with each other, the inner pipe 53 is joined with the cold water admission port 12 of the power plant ship 10, a connection part is provided on a terminating end of the outer pipe 52 and joined with the connection part of the water intake pipe 41, and at least one buoy is mounted on the outer pipe 52 and the inner pipe 53.	KAIYO NOGEN KAGI KOFUN YUGENKOSHI	JP2009089073	2009/4/1

93	The underwater cryogenic fluid transfer system	The current invention includes to systems and methods of transferring cryogenic fluids between two locations. More particularly, some embodiments of the invention are related to systems and methods of using cryogenic risers and rotatable connections for transferring cryogenic fluids, including liquefied natural gas, from an ocean going vessel to a second location. One embodiment of the invention includes a system for transporting a cryogenic fluid between a floating vessel and a second location. The system including a cryogenic riser, a submersible turret connector. The being riser adapted to allow the vertical position of the first end of the riser to be changed, the second end of the first riser located in a body of water and in fluid communication with the second location. The submersible turret connector connected to the first end of the first riser. The first connector adapted for releasably connecting to a first floating vessel located on the body of water so that a cryogenic fluid can be communicated between the first vessel and the first end of the first riser, the first connector being moored to the bottom of the body of water such that the vertical position of the first connector can be changed, and the first connector adapted to allow the first vessel to rotate around the first connector upon the surface of the body of water while the first vessel is connected to the first connector.	ExxonMobil Upstream Research Company500450727	JP2007536696	2005/9/7
94	METAL COLLECTION SYSTEM AND METHOD	PROBLEM TO BE SOLVED : To provide a metal collection system and method, by which a high metal collection efficiency can be maintained independently of the sea area where a metal collection material is installed. SOLUTION : The metal collection system is constituted with : a mooring device 10 for mooring a metal collection material in a metal collection area W of seawater; and a temperature controller 20 for controlling the temperature of the seawater in the metal collection area to a target temperature. The target temperature is set within a temperature range of 25-35°C. The temperature controller 20 obtains the thermal energy required to control the temperature of the seawater to the target temperature by using one or both of waste heat and natural energy. COPYRIGHT : (C)2012, JPO&INPIT	IHI CORP	JP2010274928	2010/12/9

95	CENTRIFUGAL FORCE POWER GENERATION	PROBLEM TO BE SOLVED : To solve the problem wherein, though there are photovoltaic power generation, solar thermal electric conversion, hydraulic turbine power generation, water channel power generation, wind power generation, tidal power generation, wave activated power generation, ocean thermal difference power generation and geothermal generation in a technology for converting electricity by development of clean energy today when global warming is talked about, any of them is undesirable for efficiency of power generation comparatively for requiring both vast funds and power. SOLUTION : This power generation method is eco-friendly by reducing discharge of CO2 by arranging a clean energy generator by effectively utilizing flowing water of rivers. Electric power is generated by rotating a cylindrical float with blades. Power generation efficiency is enhanced by increasing operation of centrifugal force by using a float of housing a weight in a cylindrical float chamber with the blades. 	TERAUCHI TAKEO	JP2010252659	2010/11/11
96	Aircraft, ships, and it is provided with a rotary machine smart vortex generator	A smart vortex generator including a main body, disposed on a body surface, such as a main wing of aircraft, making a boundary to a flow of fluid, and at least a part of which includes a shape memory alloy. A form of the main body, depending on a temperature increment/decrement of the fluid, changes between (1) a first form capable of suppressing a flow separation by a vortex generation and (2) a second form capable of suppressing a turbulent flow, by a phenomenon that the shape memory alloy undergoes a phase transformation between a high-temperature-side stable phase and a low-temperature-side stable phase. The smart vortex generator demonstrates a multi-directional characteristic depending on a temperature change, such that no energy supply from the outside is required. The structure is simple, and repairs and maintenance as well as installation to existing wings are easy.	The University of Nagoya University504139662	JP2007528908	2005/12/28

97	Device for generating superheated steam, and a generator connected to an outboard robot	A superheated steam generator for generating superheated steam is disclosed that can be converted into electric energy by adsorbing water into zeolite and desorbing water from zeolite by use of solar heat source energy and seawater source energy. The superheated steam generator using zeolite is provided with a water supply device for causing the zeolite to adsorb mist-state moisture and heat the zeolite, a zeolite boiler system including a desorption heater for desorbing water molecules adsorbed onto the zeolite and heating the zeolite to produce the superheated steam, a low-temperature purified water tank for storing purified water that can be subjected to heat exchange with at least one of seawater and surface water, and for supplying purified water energy subsequent to the heat exchange to the water supply device, and an atomization device for generating the purified water supplied to the water supply device as the mist-state moisture.	Tokio Okawa	JP2010530208	2009/10/14
98	MARINE VESSEL EQUIPPED WITH AT LEAST ONE REFRIGERATOR	PROBLEM TO BE SOLVED : To use waste heat of a power source especially specified for a ship drive device as optimally and completely as possible, thereby enabling economical ship operation. SOLUTION : At least one refrigerator is formed as an absorption refrigerator 1. At least one power source 3 is connected to the at least one absorption refrigerator on the waste-heat side. The absorption refrigerator has at least one waste-heat conduit branched on the waste-heat side. At least one waste-heat conduit of the absorption refrigerator is connected to at least one waste-heat utilization device 2.	Meyer Werft GmbH	JP2011154485	2011/7/13

99	Hybrid power generation system	PROBLEM TO BE SOLVED : transmission of information sensor installed on the sea tidal power generation system is used as a temperature difference in the ocean, attached power or wind power as a wave activated power generation system coupled to a power supply system for an unattended operation as a variable and self-operation of the hybrid power generating system. SOLUTION : ocean thermal energy conversion system 9 the liquid ammonia in the evaporator 3 for driving a power source of warm surface water supply pump 2, 2 ′ ammonia gas in the condenser cooling water pump is employed as a driving power source for a wind power generator system 1 is coupled, self-sustaining operation does not depend on the presence or absence of the accumulator. The wind power generation system is employed in place of a wave power generating system 10. Selected drawing : fig. 1	Morita End305002279	JP2011004416 U	2011/7/29
100	The maritime floating structure self facility	PROBLEM TO BE SOLVED : To provide marine self-support equipment for a large-sized floating body structure capable of being stably moored even in a sea area having the deep depth of water and self-supporting energy such as required power and water. SOLUTION : The large-sized floating structure 10 installed on the sea is installed by being connected with a floating breakwater bank 20 in a breakwater sea area of the floating breakwater bank 20 moored and installed at the bottom of the sea and equipment for self-supporting required power is constituted by mounting power generation equipment using natural energy usable in the breakwater bank 20 and the large-sized floating body structure 10. As a result, a mooring rope for installing the large-sized structure 10 becomes unnecessary, the large-sized floating structure 10 can be installed in a breakwater sea area, the structure 10 can be installed in an offing having the deep depth of water, a vessel is capable of approaching and coming alongside the pier, and power is self-supported by mounting the power generation equipment using natural energy usable on the sea on the floating breakwater bank and the large-sized floating structure.	Japan Railway Construction Transport and Support Agency303059071; Japan Agency for Marine Earth504194878; National Maritime Research Institute National Institute501204525 ; IHI Marine United Inc502422351	JP2001058257	2001/3/2

101	LIQUEFIED CO2 OFFSHORE DUMPING PLATFORM	PROBLEM TO BE SOLVED : To provide a technology of a liquefied CO2 offshore dumping platform which is capable of performing the submarine treatment of CO2 gas by recovering liquefied CO2 which is generated at a thermal power plant or an iron mill, subjected to the liquefaction treatment and accumulated in a storage tank for the exclusive use with a liquefied CO2 tank transport ship and connecting the same with a floating dock to emit the liquefied CO2 in the transport ship into deep sea of 50 barometer pressure at one stretch. SOLUTION : The technology of the liquefied CO2 offshore dumping platform is comprised of the thermal power plant or the iron mill, the CO2 liquefaction treatment facility, the tank for the storage of liquefied CO2, the sea surface 4, the liquefied CO2 tank transport ship 5, the seabed 6 of a continental shelf and the floating dock 7 (liquefied CO2 offshore dumping platform), a pipe 8 extended even under the interface 9 of the depth of water of 500 M and the hydraulic pressure of 50 barometric pressure, the outlet 10 of the liquefied CO2, and the deep ocean floor 11. 	HAGA GUNJI	JP2009191446	2009/7/30
102	Marine platform submerged open-cum-autopositioning	An open-ocean fish-growing platform has a submersible cage structure for growing fish, an antenna for receiving positioning signals transmitted from an external source, a position-correction apparatus for calculating a position error signal from a target geostationary position, and an ocean thermal energy conversion (OTEC) system for generating electric power for thruster units to maintain the cage structure in the target geostationary position. The OTEC system inducts colder ocean water from a deeper ocean depth for driving its heat exchange cycle, and is also of hybrid type using a fuel-fired unit as a heat source. The cold water effluent from the OTEC system is directed into the cage for flushing wastes generated by the growing fish. The self-positioning, self-powered open-ocean platform enables unmanned, extended marine deployment in deeper ocean waters without the need for tethering or anchoring to the ocean floor.	HAWAII OCEANIC TECHNOLOGY INC	JP2010523202	2008/9/3

103	ENERGY SAVING AIR DRIVING ELECTRIC SHIP UTILIZING AIR BUBBLE CAPABLE OF PRODUCING HYDROGEN AND REDUCING CO2 EMISSION	PROBLEM TO BE SOLVED : To provide an air driving electric ship which can reduce CO2 emission and is replaceable with a ship using petroleum as an energy source to prevent sea pollution. SOLUTION : In the CO2 emission reducing ship, an electric motor 12 is driven by a wind power generating device A installed in a rear of the ship. A water propeller 8 is arranged near the bow of the ship like a jet plane. Water resistance around a ship bottom is reduced by 30% by a bubble amount increasing structure to save energy. In a medium-sized ship or larger ones except for a small-sized ship, hydrogen is produced by excess electricity generated on the ocean. Part of the hydrogen is used for keeping the freshness of marine products or the like and most of the hydrogen is stored in a dual tank with a safety valve and sold after returning to a port. The electricity generated in harbor can be also sold. COPYRIGHT : (C)2011, JPO&INPIT	SUMIZAKI KIMIMASA; SUMIZAKI MAKIKO	JP2009145819	2009/5/12
104	Submersible and temperature difference generating method	PROBLEM TO BE SOLVED : To improve energy efficiency in a vessel, especially a submersible, and make the submersible smaller and lighter. SOLUTION : Temperature difference generating equipment 30 is employed, which is mounted on a vessel and equipped with a pump 35, a heat exchanging part 31 for heating, a turbine 32, a heat exchanging part 34 for heat radiation, and a generating unit 33. The pump 35 raises the pressure of working fluid in a first state of a liquid phase, bringing it to a second state of a liquid phase. The heat exchanging part 31 for heating raises the temperature of the working fluid in the second state, bringing it to a third state of a gas phase. The turbine 32 expands the working fluid in the third state, bringing it to a fourth state of a gas phase. The heat exchanging part 34 for heat radiation lowers the temperature of the working fluid in the fourth state, bringing it to the first state. The generating unit 33 is connected to the turbine 32, generating electric power. Then, the heat exchanging part 31 for heating raises the temperature of the working fluid through exchange of heat with exhaust heat of a fuel cell mounted on the vessel. The heat exchanging part 34 for heat radiation lowers the temperature of the working fluid through exchange of heat with water surrounding the vessel and flowing at least in one of inward and outward directions from and into the vessel. COPYRIGHT : (C)2005, JPO&NCIPI	Japan Agency for Marine Earth504194878; Mitsubishi Heavy Industries Ltd6208	JP2004052498	2004/2/26

105	The steering of the vehicle or equipment and for safety system	A system for a vehicle is provided for allowing a user of the vehicle or installation to obtain advanced and up-to-date information about the surroundings of the vehicle or installation and the vehicle or installation itself. The system may be located on a marine vessel and it integrates information from a number of different information sources, located both on and off the vessel, including information from advanced radar and sonar subsystems on the ship, information from conventional instruments and sensors and information from onshore and offshore installations and EO satellites accessed via a control centre onshore. The system may communicate with the control centre via a communication satellite and/or wireless Internet, if available. A data processing apparatus for processing and presenting the data is also provided. The data is received, processed and presented in three dimensions in space and updated in real time or near real time such that time provides a fourth dimension to the data. A graphical user interface for presenting the data is also provided. The graphical user interface provides functionality for reporting an error in the system if the end user's own observations do not match the presented data. Additionally, a system for collecting data comprising more than one ship, the control centre and means for the ships and the control centre to communicate is provided. The system comprises a catalogue and storage network for storing collected data. All data is stored with an associated quality measure of the data.	Marine and Remote Sensing Solutions (M ares agent SS)509073811	JP2009527830	2007/9/13

106	Power generating device	The present invention provides a power-generating apparatus comprising : an auto-control electronic mechanical unit, a power-generating unit, a power transportation device, a liquid supply device, a shift device, a discharge device; wherein, the power-generating unit includes at least a pair of interactive and coupled reverse-linked movement bodies, the said movement body is a hollow movement body; changing the weight relationship between the two movement bodies via adding liquid to one of the two movement bodies by liquid supply device while discharging liquid from the other one of the two movement bodies by shift device and discharge device, so that the movement body filled with liquid goes down and brings the movement body without liquid up as to generate power in continuity and cycle using lifting and drop movement of the two movement bodies. The power-generating apparatus can utilize objects' gravitational potential energy to generate power in cycle uninterruptedly so as to ensure the continuity and stability of power generation; the power-generating apparatus completely uses the natural energy existing in the nature world during its entire power generation process, the energy conversion rate is over 90%, higher than all currently existing forms of power generation, the whole power generation process is energy-saving and environment protecting and low cost. The power-generating apparatus has a simple and feasible structure. Its size can be either large or small. It can be parallel connection or series settings. To build up the power station based on the power-generating apparatus device of this invention it requires less investment and has the advantages such as large power generation capacity, short building cycle and quick investment return	LANZHOU JINFULE BIOTECHNOLOGY CO LTD	JP2009525900	2007/8/31

107	MULTIPLEX GENERATOR OPERATION DEVICE BY ONE ROTATING SHAFT	PROBLEM TO BE SOLVED : To solve a problem that percentage of electricity produced by using natural energy is only about one percent of the whole production of electricity and each of a thermal power generation system, a hydraulic power generation system and an atomic power generation system has merits and demerits as the thermal power generation system has a problem that material cost rises and a large amount of CO2 which is a ringleader of global warming and other environmental pollutants are exhausted, only the hydraulic power generation system stably produces electricity by clean natural energy, but has a problem of a change of water sources and environmental destruction by dam construction and the atomic power generation system always has a danger of radiation contamination and a criticality accident in spite of exhausting a small amount of CO2. SOLUTION : This multiplex generator operation device is devised to convert stable and free-of-charge ocean currents which are enormous floating energy of straits to a large amount of electricity. Specifically, it is devised to efficiently generate a large amount of electricity by connecting a large number of generators to a rotating main shaft of a hydraulic turbine set on the bottom of the sea to further effectuate a completely new energy power generation system using the ocean currents. 	MURAOKA YOSHIYASU	JP2008131411	2008/5/19

108	OCEAN CURRENT POWER GENERATING SYSTEM IN ENGLISH CHANNEL	PROBLEM TO BE SOLVED : To solve a problem such that a technique for converting clean natural energy with a small amount of discharge of CO2 into electric power, such as water turbine power generation, conduit type power generation, wind power generation, photovoltaic power generation, wave activated power generation, tidal power generation, geothermal power generation, ocean thermal energy conversion power generation or the like, has drawback and advantage today when global warming is an actual threat and cannot generate a large amount of electric power stably at low cost. SOLUTION : The power generation system is configured to convert stable ocean current of English Channel as an enormous amount of fluid energy into electric power by utilizing the Channel Tunnel. More specifically, a plurality of tunnel spaces exclusively used for generating electric power are formed by excavation while using the facilities of the Channel Tunnel as a passage way, and power generation equipments are installed there. Turbine wheels are arranged on the ocean bed portions just above the equipments and connected to the equipments. The fluid energy of the ocean current is converted into rotational energy via the turbine wheels, thereby operating the power generation equipments. 	MURAOKA YOSHIYASU	JP2008121841	2008/5/8
109	Ocean wave energy converter	Devices and methods for capturing electrical energy from ocean and other waves at improved cost and efficiency are presented. The major innovations include capturing energy in two vectors simultaneously and connectedly, new applications of Bernoulli's principle, and an application of the breaker effect. The invention presents devices using related principles for use in surface and subsurface waves, and the placing of the devices in the water and wave farms. The full system of wave capture includes many connected parts and power generators.	Daniel Farb508197756	JP2008549103	2007/1/2

110	OCEAN CURRENT POWER GENERATION SYSTEM DEDICATED TO FUTURE OF OUR DEAR EARTH AND CHILDREN	PROBLEM TO BE SOLVED : To solve a problem such that a technique for converting clean natural energy with a small amount of discharge of CO2 into electric power, such as water turbine power generation, conduit type power generation, wind power generation, photovoltaic power generation, solar heat power generation, wave activated power generation, tidal power generation, geothermal power generation, ocean thermal energy conversion power generation or the like, has drawback and advantage today when global warming is an actual threat and cannot stably generate a large amount of electric power at low cost. SOLUTION : The ocean current power generation system is configured to convert stable ocean current of Tsugaru Channel as an enormous amount of fluid energy into electric power by utilizing the working gateway of Seikan Tunnel. More specifically, a plurality of tunnel spaces exclusively used for generating electric power are formed by excavation while utilizing the working gateway as a passage way and power generation equipments are installed there. Water turbines are arranged at the ocean bed portions just above the equipments and connected to the equipments. The energy of the ocean current is converted into rotational energy via the water turbines, thereby generating electric power.	MURAOKA YOSHIYASU	JP2008110984	2008/4/22

111	THERMOELECTRIC GENERATION SET, AND POWER GENERATION SYSTEM USING THERMOELECTRIC GENERATION SET	PROBLEM TO BE SOLVED : To provide a thermoelectric generation set which efficiently performs thermoelectric conversion (power generation) from fluids with a temperature difference, is easy in maintenance and smaller in required space, and supplies more inexpensive and stable power than a conventional system, and to provide a power generation system using the same. SOLUTION : A thermoelectric element 27 in which P-type thermoelectric semiconductor devices and N-type thermoelectric semiconductor devices are alternately juxtaposed each other is sealed in a heat-transfer plate 30 so that the thermoelectric element may be held through an electrode and an insulator, by which a plate-like thermoelectric generation unit 31 is formed and a plurality of generation units are laminated. First space 32 through which the high-temperature fluid W circulates, and second space 33 through which the low-temperature fluid C circulates are alternately formed between the generation units. Openings formed at each plate-like thermoelectric generation unit 31 are arranged in a row, and a first inflow path 34 and a first outflow path 35 are formed through which the high-temperature fluid W flows into or from the first space 32, while a second inflow path and a second outflow path are formed through which the low-temperature fluid C flows into or from the second space 33. 	IHI MARINE UNITED INC	JP2007250576	2007/9/27
112	LNG transport vessel and a method for transporting a hydrocarbon	A vessel for transporting liquefied natural gas is provided. The vessel generally includes a gas transfer system for on-loading and off-loading natural gas to and from the vessel at essentially ambient temperature. The vessel further includes a gas processing facility for selectively providing liquefaction and regasification of the natural gas. The vessel also includes a containment structure for containing the liquefied natural gas during transport. The vessel may be a marine vessel or a barge vessel for transporting LNG over water, or a trailer vessel for transporting LNG overthe-road. A method for transporting LNG is also provided, that provides on-loading of natural gas onto a vessel, condensing the natural gas, storing the gas on the vessel in liquefied form, transporting the gas to an import terminal, vaporizing the gas, and off-loading the gas at the terminal.	ExxonMobil Upstream Research Co500450727	JP2007538975	2005/10/17

113	Draft tube pressure prediction method and control method of a hydraulic machine and a method for selecting a suction head	PROBLEM TO BE SOLVED : To predict pressure in a draft tube with good accuracy when a load is shut out by finding out a minimum pressure of a low pressure side reference cross section and rotating speed from change of an operating condition which is estimated while assuming that phase change is not generated even if pressure of water in a pipe passage becomes saturated steam pressure and less, and finding out minimum pressure by a specified expression. SOLUTION : It is assumed that phase change is not generated even if water pressure in a draft tube 8 is reduced lower than saturated steam pressure of water in its temperature, and operating point change is estimated. A minimum value H2min of pressure of a low pressure side reference cross section of a reversible pump-turbine and rotating speed (n) in this time are found out from its estimated result, and a minimum pressure Hdmin in the reversible pump-turbine is estimated by an expression : Hdmin =H2min -ΔH, and an expression : ΔH=k(Ue /2 g). ΔH is a liner outlet part draft tube inner local pressure sinking rate, Ue is liner outlet outer periphery speed when the minimum value H2min is generated, (g) is gravitational acceleration, and (k) is a value found out by an experiment or 0.06. Pressure in the draft tube 8 when a load is shut out is predicted with a high accuracy on the basis of an experiment result by the predicting method.	ELECTRIC POWER DEV CO; TOSHIBA CORP	JP10088784	1998/4/1
114	The convection temperature		ABE TOSHIHIRO	JP2001061371	2001/3/6

115	GROUND DOME, GLOBE DOME, WATER STREAM POWER GENERATION, AND TIDAL CURRENT POWER GENERATION	PROBLEM TO BE SOLVED : To protect the human being from natural disasters like a typhoon or snowfall and to provide environmentally friendly power generation utilizing water stream and tidal current as alternatives to thermal power generation and nuclear power generation. SOLUTION : To prevent the natural disasters like the typhoon and the snowfall, the ground is covered with a dome. Ultimately, the whole globe is covered with the dome. The dome comprises transparent hard plastic pieces having pentagonal and hexagonal shapes which are assembled like making a soccer ball to form a sphere. The wind does not blow when the ground is covered with the dome. Therefore, electric power is generated using the natural energy like the water stream of rivers or tidal current of the sea. A wind power generator is installed upside-down in the river or the sea. In the tidal current power generation, a dyke is constructed in a shallow sea area.	KOMORI TAKASHI	JP2004220933	2004/6/21
116	TEMPERATURE DIFFERENCE POWER GENERATION DEVICE	PROBLEM TO BE SOLVED : To solve a problem wherein thermal efficiency of a device driven by low temperature difference about several tens of °C or less such as various waste temperature or ocean temperature difference in conventional thermal power generation devices generating power using a high temperature heat source and a low temperature heat source is extremely low. SOLUTION : Solar heat or the like as a high temperature heat source of a temperature difference power generation conventionally driven by temperature difference of several tens of °C or less is compoundly used to make temperature difference 100°C or more and increase thermal efficiency. Possibility of use in industry is increased by compounding with a conventional gas turbine power generator, an internal combustion engine power generator and a fuel cell.	SAITO TAKEO	JP2004108222	2004/3/31

117	LIFESAVING APPLIANCE HAVING BODY TEMPERATURE ADJUSTING APPLIANCE	PROBLEM TO BE SOLVED : To provide a lifesaving appliance having a body temperature adjusting appliance, which lifesaving appliance has a means for allowing persons to easily finding its wearer, and can keep the wearer's body temperature appropriate until the saving by finely adjusting the wearer's body temperature according to the outside temperature and the body temperature. SOLUTION : The lifesaving appliance comprises thermal members which are arranged so as to come into contact with both side positions of a neck, where common carotid arteries pass, and so as to come into contact with both armpit positions, where axilla arteries pass, respectively, when the body of the lifesaving appliance has been worn on the wearer's body, an electric power source for supplying electric power to the thermal members, a body temperature detecting means for detecting the wearer's body temperature, an outside temperature detecting means for detecting an outside temperature, and a temperature controller for adjusting the temperature of the thermal members based on the temperatures detected by the body temperature detecting means and the outside temperature detecting means. By this configuration, the wearer's body temperature can be kept appropriate in case of emergency.	TOWA IRYOKI KK	JP2004009490	2004/1/16

118	HYDROGEN MANUFACTURING FACILITY AND HYDROGEN MANUFACTURING TRANSPORTATION SYSTEM ON OCEAN	PROBLEM TO BE SOLVED : To provide a hydrogen manufacturing facility on the ocean efficiently converting natural energy into hydrogen energy, reducing energy loss in storing/transporting hydrogen, and improving the efficiency of whole of the system. SOLUTION : The hydrogen manufacturing facility on the ocean is equipped with : a power generation means 2 performing power generation by utilizing natural energy such as wind power and sunlight or the like on a floating body 1 floating on the ocean; a seawater desalination means 3 desalinating the seawater; a water electrolyzing means 4 generating hydrogen by electrolyzing freshwater obtained by the seawater desalination means 3 by making the generation power obtained with the power generation means 2 as a power source; an organic hydride generation means 5 which hydrogenates hydrocarbon compound by reacting hydrocarbon compound and the hydrogen obtained by the water electrolyzing means 2 under the existence of a catalyst, and generates the organic hydride; and a storage means 6 storing generated organic hydride. The seawater desalination means 3 performs desalination by utilizing heat energy generated at the time of generating the organic hydride.	ISHIKAWAJIMA HARIMA HEAVY IND	JP2003385007	2003/11/14
119	Ocean transportation tank supporting structure	PROBLEM TO BE SOLVED : To avoid the concentration of a load to a cargo tank end section by forming the heat insulating support materials of seats provided at the cargo tank end section with a soft material having the Young's modulus lower than that of the heat insulating support materials for portions other than the end section. SOLUTION : Multiple bottom section bearing seats supporting the load in the vertical direction are provided with heat insulating support materials 1 between support bases 3 on the tank side and support bases 3 on the hull side, for example. When the hull is deformed, the support materials 1 are shrunk largely at a tank end section and not so much at the center portion, and the load applied to the hull is changed. A support material (elastic body) having the Young's modulus lower than that of the heat insulating support materials for other portions is used only for the seats at the cargo tank end section to be easily expanded or shrunk. The large load at the hull end is also received by the peripheral seats, and the load received by the end section seats themselves can be distributed and reduced.	MITSUBISHI HEAVY IND LTD	JP10372434	1998/12/28

120	Method and device for compressed gas	The methods and apparatus for transporting compressed gas includes a gas storage system having a plurality of pipes connected by a manifold whereby the gas storage system is designed to operate in the pressure range of the minimum compressibility factor for a given composition of gas. A displacement fluid may be used to load or offload the gas from the gas storage system. A vessel including a preferred gas storage system may also include pumping equipment for handling the displacement fluid and provide storage for some or all of the fluid needed to load or unload the vessel.	Ena Sea Transport LLC503085067	JP2002524988	2001/9/4
121	OCEAN POWER GENERATOR AIRPLANE TYPE LEGLESS CHAIR	PROBLEM TO BE SOLVED : To rotate a power generator by tidal current or river flow and to generate electric power in order to dissolve an environment pollution problem caused by a conventional power generating method such as thermal power generation or nuclear power generation. SOLUTION : A power generator frame body 1 is placed on an airplane wing 7, and is fastened by a bolt. The power generator frame body 1 is directed to the flow by a power generator frame direction rudder 5, and a power generator rotating propeller 3 is moored between a float and an anchor 6 in the bottom of the sea. This ocean power generator airplane type legless chair is installed in a warm current flowing along the Japanese islands at a speed of 1.5 meters per second, a domestic channel or a big river.	KUWANO MITSUO	JP2003167142	2003/5/8

122	METHOD AND APPARATUS FOR CLEANING EXHAUST GAS	PROBLEM TO BE SOLVED : To provide a method and an apparatus for cleaning exhaust gas by removing gaseous SO2 and dust particles by almost 100% and further removing COx and NOx being the cause of the global warming sufficiently and to make the apparatus inexpensive and compact enough to be loaded on a vessel. SOLUTION : When the toxic component of the gas to be treated is removed by using a scrubber for bringing the gas to be treated into gas-liquid contact with salt water, DC voltage is applied through at least one pair of electrodes disposed on the upstream side and the downstream side of the flow direction of the salt water in the scrubber to electrically connect the two electrodes through the salt water flowing from the upstream side to the downstream side so that gas-liquid contact treatment and electrolytic oxidation/reduction treatment are performed between the gas to be treated and the salt water existing in the scrubber and flowing on the surfaces of the electrodes.	TASHIRO MASANORI	JP2002251223	2002/8/29
123	The environmental system based on hydrogen	A hydrogen storage bed capable of storing and releasing hydrogen comprising : a hydrogen storage alloy material; a solid support means having a high porosity and a high thermal conductivity, wherein said solid support means holds said hydrogen storage alloy material in a fixed position; a plurality of hydrogen flow channels configured to : 1) transport hydrogen into and thermal energy out of said hydrogen storage alloy material during storage of hydrogen therein; and 2) transport hydrogen out of and thermal energy into said storage alloy material during release of hydrogen therefrom.	ENERGY CONVERSION DEVICES INC	JP2001540858	2000/11/14

124	FACILITY AND METHOD FOR TREATING INDUSTRIAL WASTE ON VESSEL	PROBLEM TO BE SOLVED : To provide a facility and a method for treating industrial waste at a low cost in which oceanic waste can be treated on a vessel and recovered as resources without generating dioxine. SOLUTION : FRP waste is carbonized and thrown into a melting furnace together with cokes and combusted. Substances discharged as molten slag are separated and collected as metal oxides which are then blown into the combustion chamber in the furnace and combusted completely. Unburnt hydrocarbon is oxidized and decomposed and precursors of dioxins, e.g. organic chloride compounds, are removed. On the other hand, shells are calcined in a calcination furnace using combustion exhaust gas to produce slaked lime. At the same time, hydrogen chloride being generated in the incinerator is reduced in order to protect a smoke exhauster against corrosion and collected by a dust collector while being separated before filtered clean gas is discharged into the atmosphere. Furthermore, environmental protection products, e.g. a soil improving agent or a water quality purifier, are produced from treated slag or slaked lime on a vessel for treating industrial waste.	DEBARI NOBUAKI	JP2000404494	2000/12/20
125	SUIT FOR DIVING	PROBLEM TO BE SOLVED : To provide suit for diving, to which heat storage property is imparted so as to have temperature-controlling function, capable of modifying heat, stuffy state and cold in diving in a state in which the suit is worn. SOLUTION : This suit for diving has a heat storage layer composed of foam or rubber in which heat-storing particles are dispersed. Microcapsules having a latent heat storage agent encapsulated in the shell are suitably used as the heat-storing particles. The latent heat storage agent ordinarily exhibits endothermic action (or heat-releasing action) by utilizing phase change of liquid- solid and has relatively large endothermic capacity. The suit prevents human bodies from directly transmitting raise and lowering of water containing and keeps bodily sensation of human bodies in comfortable range by using the latent heat storage agent of raw material causing phase change at 6-35°C in the suit.	BRIDGESTONE CORP	JP2000118126	2000/4/19

126	SUPER EFFICIENT DOUBLE ROTATING METHOD AND ITS DEVICE FOR CONVECTION TEMPERATURE DIFFERENCE PRIME MOVER	PROBLEM TO BE SOLVED : To increase an output in a high efficient method and its device for a convection temperature difference prime mover taking out rotational energy from centrifugal separating convection by utilizing a change of specific gravity due to expansion/contraction of gas by giving a temperature difference without evaporation and liquefaction. SOLUTION : This device makes a peripheral wall 7 rotate at a high speed in a cooling convection path 13 gear connected by providing an external peripheral wall rotary unit 17 in also a heating convection path 6. A temperature of convection gas is increased by centrifugal compression in this peripheral wall by centrifugal force thereof, a heat exchange rate is increased, while an external peripheral wall of the heating convection path 6 is rotated at a low speed, when convection gas from the cooling convection path 13 is allowed to flow in, a temperature of the gas is decreased by expansion due to this weakened centrifugal force, a temperature difference from the heating convection path 6 is also increased, the heat exchange rate is further increased, and an output is highly increased.	ABE TOSHIHIRO	JP11164996	1999/6/11

127	HIGHLY EFFICIENT METHOD AND ITS DEVICE FOR CONVECTION FLOW TEMPERATURE DIFFERENCE PRIME MOVER	PROBLEM TO BE SOLVED : To generate electricity pollution-free, durable and high in efficiency at low cost by forming a high pressure super efficient tornade of a centrifugal separation type within each cylinder by the difference in low temperature between the surface layer water and deep layer water of the ocean and the like, to mix the deep layer nutritious water (cold water) with the surface layer water to activated fishing ground, and to adjust rainfall of low atmospheric pressure of typhoon by lowing of the surface layer water temperature by large-sized power generation. SOLUTION : High pressure air within a heating convection flow path 6 comprising a high temperature transfer spiral bellows formed in a great number of cylinders 1 vertically floated at intervals, is heated by surface layer water to reduce weight so as to be raised up while being spirally rotated, and simultaneously, high pressure gas in the vicinity of V-shaped fins of a cold water path in deep layer water and the like, becomes heavier, and thereby descends downward so as to centrifugally enter into a cooling convection path with pressure, so that it is turned out to be rotated at high speed. Massive torque is thereby generated by a cynerigistic effect and centrifugal separation pressure, and the leading rotation of a circumferential wall rotor 7 thereby allows fluid friction to be markedly decreased, and enables electric power high in output to be generated at extraordinary low cost.	ABE TOSHIHIRO	JP11118280	1999/4/26
128	The thermal energy conversion (OTEC) system sea	An ocean thermal energy conversion system (400), comprises a desalination sub-system including a flash evaporator (406) adapted to evaporate warm sea water into steam, and a first condenser (412) adapted to condense the steam into fresh water using cold sea water and an energy generation sub-system adapted to power the desalination sub-system. The energy generation sub-system includes a working fluid evaporator (418) adapted to evaporate a working fluid into a working vapor using warm sea water, a turbine-generator (422) powered by the working vapor, and a second condenser (416) adapted to condense the working vapor to liquid by using cold sea water.	オーティーイーシー・ディヴェロップメンツ	JP09501395	1996/6/7

129	An open cycle ocean thermal power generation and fresh water production method for fresh water production device	PROBLEM TO BE SOLVED : To provide a fresh water manufacturing device having improved efficiency in manufacturing fresh water and a method therefor in an open cycle ocean thermal energy conversion system for producing electric power and fresh water. SOLUTION : When cold fresh water 4 whose temperature nearly equals to the temperature of the cold sea water 3 in the deep sea is produced on the surface of a heat conductive pipe 41 from the cold sea water 3 by means of reverse osmotic pressure, the fresh water 4 forms a cold fresh water film 7 on the heat conductive surface around the heat conductive pipe 41 formed by a reverse osmosis membrane and hence steam 2 produced by an evaporator 10 is put into direct contact with the cold fresh water film 7 to get heat absorbed and to be condensed, which produces the fresh water 4 by the reverse osmosis membrane and by condensed steam 2.	KOGYO GIJUTSU INCHO	JP08316533	1996/11/27
130	INTAKE PIPE FOR OCEAN DEEP WATER	PROBLEM TO BE SOLVED : To solve problems that through an ocean deep water intake pipe with a large diameter more than 1, 000 m, long and thermal insulation must be installed in order to materialize business with usage of ocean energy and marine culture in ocean deep water, a polyethylene pipe with a diameter larger than 1 m is not marketed and huge investment is required for its production, a difficult problem exists to transport the pipe with a diameter larger than 1 m and a length more than 1, 000 m, a large exclusive ship is occupied for a long time, many boats and expensed are required at an installing site problems depending to weather, tide, or geography exist, and pipes made of other material are expensive and have no thermal insulation. SOLUTION : An arrow plate A made of high density polyethylene resin, which has a cross section in the shape that an arrow is bent in the circular arc shape and is a long band plate, is extrusion molded, is wound around a reel with a 2-10 m diameter, is transported to the installing site, is transformed to a pipe with a thermally welding machine and simultaneously so formed to two layers by welding a net containing polyethylene plate to its armor, is transformed to a barrel structure pipe by winding iron rings around it, and is installed.	OFUKU KENZO	JP10089160	1998/2/25

131	Wave-dissipating structure attached to the pendulum type wave power generating device	PURPOSE : To provide a pendulum type wave power generator to be installed on a wave dissipation structure of pile fixation type which is installed offshore so that pendulum plates are swung offshore where the wave energy is comparatively high, with which the share of the wave dissipation structure in the equipment cost can be lessened. CONSTITUTION : A wave dissipation structure 1 is composed of wave dissipation blocks 2-1, 2-2 where vertical wave dissipation plates 10 having a certain length provided at the front face, vertical wave dissipation plates at the rear face, pillars 60, and beams are formed in a single piece structure and a water-permeable skeleton structure 50 which supports them in the lower part and is equipped with inserting holes 52 for piles to be fixed to the ground. The plates 10 at the front face are located as confronting the outside of a bay in the longitudinal or transverse arrangement at a certain spacing, wherein the gaps between them serve as wave dissipation holes 12, and a wave receptacle hole 40 is installed in the direction perpendicular to the wave faces. The other plates at the rear face are arranged confronting the inside of the bay in such an arrangement as parallel with the front face wave dissipation plates 10 and are provided with wave dissipation holes and wave outlets. Pendulum plates 90 are installed swingably in positions opposing to the wave receptacles 40 in the plates 10, and a power generator is installed on this wave dissipation structure.	TODA KENSETSU KK; KONDO YOSHIRO	JP07047864	1995/2/13

132	Self-supporting conduit system	PURPOSE : To solve the following problems : 1) there is necessary a huge conduit vertically hung down from the water surface to the deep sea in the case where ocean thermal energy conversion based on the temperature difference, liquefied carbon dioxide gas ocean disposal, etc., are carried out, 2) it is required to adopt such a mounting method as absorbing any motion of a floating body due to the wind and waves and so on, as this conduit has large inertia force, whereas it is so far attached to the floating body of a barge of the like and hung down in the past, 3) such a combined one between a spring and a sheave has been so far used, but it is not enough in use on the sea where the wind and waves are strong, so such a case that it came to be inoperable was frequent in the past. CONSTITUTION : A conduit 1 is attached to a buoy 6, and this buoy and a floating body 2 is coupled by a link 7, whereby any motion of this floating body due to the wind and waves is absorbed, and a weight 8 with larger underwater weight than a buoyancy decrement at a time when a large wave trough passes through the buoy is attached to a lower end of the conduit, through which any buckling of the conduit is kept back and, what is more, withdrawal storage and of the conduit at time of stormy weather is made unnecessary.	MITSUBISHI JUKOGYO KK	JP03081669	1991/3/20

133	NATURAL ENERGY BEST MIX SYSTEM	PROBLEM TO BE SOLVED : To more efficiently use natural energy such as the sunlight, wind power, cold of the deep sea and warm of surface water by combining, leveling and utilizing various energy which exists in the natural world and on which a usable energy quantity changes. SOLUTION : Not only power generation by the sunlight and wind power and power generation by ocean thermal energy conversion(OTEC) are used in combination, but also warm seawater taken from a surface layer of the ocean and cold seawater taken from the deep sea are used, and are used for seawater desalination and fishery-culture. Cooling of the summer period is performed by using natural energy, and growth of a plant is artificially controlled by a cooling house, and an agricultural product is stored in a cooling storage facility. In this way, cold seawater obtained from the OTEC is stored as cold from the deep sea, and can be used as a heat source of air-conditioning and heating on land, and is utilized by converting/storing the energy into/in many media such as electric power/cold by combining various energy on which an energy quantity changes.	NIPPON KOKAN KK; SHINKO WIRE CO LTD; MESCO INC; PENTA OCEAN CONSTRUCTION; HITACHI LTD; TOSHIBA CORP	JP09253438	1997/9/18
134	In an ocean thermal power plant stainproof ozone injection method	PURPOSE : To obtain an intial contamination preventing effect efficiently with a small quantity of ozone by dissolving ozone in lower layer brine primarily to obtain high density ozone brine, and injecting it to an upper layer brine line. CONSTITUTION : In supplying lower layer brine to a condenser as a cooling source, a part of it is branched to be injected to a predetermined position of an upper layer brine line through an ejector 22. At that time, the lower layer brine passing the ejector 22 sucks ozone from an ozone generator 20 as drive water. The lower layer brine coming out of the ejector 22 is high density ozone brine in which ozone is primarily dissolved to be injected to the predetermined position of the upper layer brine line. An initial contamination preventing effect can thus be obtained efficiently using only a small quantity of ozone.	HISAKA SEISAKUSHO KK	JP01247809	1989/9/22

135	CARBON DIOXIDE DUMPING SYSTEM IN THE SEA BOTTOM	PURPOSE : To prevent the adverse effect to a deep sea environment by loading a plurality of capsules containing a bag to seal the liquefied carbon dioxide, carrying them to the sea of the depth where the liquid phase condition of the carbon dioxide is kept, and dropping the liquefied carbon dioxide together with the bag on the sea bottom. CONSTITUTION : CO2 collected from a thermal power plant, etc., is first liquefied, and carried to an offshore station by a liquefied CO2 carrying ship 1. On the offshore station 2, the liquefied CO2 is fed through a dumping tube 3 to an unmanned submersible boat 10 loaded with a plurality of capsules containing a bag 11 for sealing the liquefied CO2 connected to a dumping tube outlet 4, and sealed in the spherical bag 11 which is impermeable against the liquefied CO2. A sealing valve 13 is closed after the prescribed amount of CO2 is sealed in the bag 11, and the bag is detached from the unmanned submersible boat 10. The operation such as connection to the dumping tube outlet 4 of the unmanned submersible boat 10, the sealing operation of the liquefied CO2, and the detaching operation of the sealing bag 11 which is integrated with the capsules are remotely controlled through a submersible boat control station 9.	MITSUBISHI HEAVY IND LTD	JP07056728	1995/2/21

136	Self-moved up and down in the sea, and sea water temperature difference in the vertical exchanger to perform power generation device	PURPOSE : To obtain a device which moves up and down independently undersea and conducts the exchange of the upper seawater with the lower seawater and temperature difference power generation, by making the device so that it may take in seawater at a deep part and ascend, and may discharge the seawater after temperature difference power generation at a surface part, and then may take in seawater at the surface part reversely and descend, and may discharge the seawater after temperature difference power generation at the deep part, and by repetitive operation. CONSTITUTION : In the case of a device being at deep part, a piston 6 is at a position b, and the device is stationary in balance with the outside. At this time, water of a comparatively high temperature which has been taken in at the surface part, is housed within the device, and valves A10, B11 are closed, and a valve C is opened. Also, power generation is conducted between the inside water and low temperature deep seawater around the device, by means of a temperature difference power generator 2, and an accumulator 5 is charged. The inside water is circulated by using a circulation pump 9 in order to increase the efficiency of heat transmission. In addition, when a temperature difference with the outside becomes small, valves A, B are opened, and the valve C is closed, and the whole inside water is replaced with the outside water. Meanwhile, the piston is lifted to (a) by using part of energy charged, and the balance of floating power is broken, and the dence ascends. Afterwards, the piston is returned to (b) when the device reaches the surface layer, and attains balance with surrounding water.	UNYUSHIYOU SENPAKU GIJIYUTSU KENKIYUUSHIYO	JP02161378	1990/6/21

137	Method and device for temperature difference and temperature difference generating · marine culture composite device	PURPOSE : To utilize an aeration, adding oxygen, for efficiency improvements in a condenser and thereby reduce the extent of consumptive energy in a system as a whole by installing an air mixer, mixing a minute bubble of air in deep seawater, in a front stage of the condenser. CONSTITUTION : Deep cold seawater 1 is drawn up by a deep seawater intake pipe 2 and a pumo 3 and fed to a condenser 7. After heat exchange is carried out in this condenser 7, it is fed to a marine organism cultivating device B. In this process, an air mixer C mixes a minute bubble of air in the deep cold seawater 1. Accordingly, in this condenser 7, efficiency in forced convection heat transfer is well enhanced, while a pressure loss in the deep cold seawater 1 is reduced. In addition, dissolved oxygen content in the deep cold seawater 1 is enhanced and the stirred seawater 1 is fed to the marine organism cultivating device B. Therefore, as nutrient salt seawater, a sufficient oxygen supply and a stirring effect are imparted even to a device for utilizing the deep seawater, thus the efficiency of the whole system is improvable.	AGENCY OF IND SCIENCE TECHNOL	JP02324989	1990/11/27
138	CONVERTER TRANSFORMER AND TRANSFORMATION THEREOF	PURPOSE : To provide the title converter transformer and transportation thereof capable of narrowing the installation area in the state of the final assembly. CONSTITUTION : The title converter transformer is composed of an upper tank cover 5a in the size within the transportation limit containing one multiphase converter transformer 4a and another multiphase converter transformer 4b as well as a lower tank cover 5b containing said transformer 4b and a tap change over switch 6 changing over the voltage of said transformer 4b and said transformer 4a contained in the upper tank cover 5a to be connected to lower part of the upper tank cover 5a in the final assembling step and the transportation related to said transformers.	TOSHIBA CORP	JP06148093	1994/6/29

139	Temperature difference generating device	The present invention relates to a thermal power generator for generating electric power by utilizing a high heat source and a low heat source, particularly aims to improve a power generation effect by providing an evaporator, a vapor-liquid separator, and an absorber and a regenerator, to increase thermal efficiency of an evaporator and a condenser, and to reduce cost for building apparatuses. A thermal power generator comprising an evaporator (8) for heat-exchanging between a high heat source fluid supplied from a high heat source pump (1) and a cold working fluid supplied from a cold working fluid pump (4) and a main condensation tank (19) connected to the low heat source pump for supplying a low heat source fluid, a vapor-liquid separator (9), a plurality of turbines (10, 14) and generators (5, 6), an absorber (15) connected to the latter stage of said turbine (14) for heat-exchanging a regenerated working fluid, a regenerator (11) for receiving a liquid separated by said separator (9) and heat-exchanging the separated liquid with a cold working fluid, a heater (12) for heat-exchanging a fluid discharged from said first stage turbine (10) with the cold working fluid, a pipe line having a pump (2) for feeding the cold working fluid to said heater regenerator (11) and evaporator (8), thereby vapor-liquid separating a fluid evaporated and vaporized the cold working fluid with a high heat source fluid by the separator (9), sending only the high heat vaporized working fluid to the turbine (10), providing at least two stages of a generating system, heat-exchanging the fluid discharged from the final stage turbine (14) with the cold working fluid in the absorber (15) and the main condensation tank (19), and circulating the recondensed cold working fluid through the cooling pipe line	UNIV SAGA	JP05236432	1993/9/22
140	An ocean		ADVANCED N M R	JP02010213U	1990/2/6

141	The shaft of a power generating system for a ship synchronous voltage detection circuit	Purpose : frequency, even in the case of changing the phase of the detected voltage value can be detected without enlarging the ripple voltage value of a power generation system for a marine shafts to provide synchronous voltage detection circuit. Constitution : converter or inverter main circuit voltage of three-phase power generating system for a ship to stably maintain the shaft of the synchronous voltage detection circuit 1, 2 in, a main circuit for detecting the voltage of a three-phase transformer 6, 7 and, the secondary output of the rectifier and a three-phase full-wave rectifier, the output is converted to analog and digital · A/D converter 34, the secondary output of the transformer to detect a phase voltage and a phase locked loop circuit, the specific values of the circuit timing · counter output to generate a pulse signal from a decoding circuit 37 and is composed, the time constant of the voltage of the main circuit, a smoothing circuit without increasing frequency · phase change is converted into a digital quantity stably.	NISHISHIBA ELECTRIC CO LTD; TOSHIBA CORP	JP05034232U	1993/6/24
142	THERMOELECTRIC SUPPLY METHOD WHICH CONTRIBUTES TO CONSERVATION OF ENVIRONMENT	PURPOSE : To provide an effective thermoelectric supply method which enables effective utilization of cold heat of the Kurile Current as a large scale cold heat source and is useful for power generation which contributes to the conservation of environment and area-wide air conditioning while ensuring a heat source for conditioning at low cost in summer. CONSTITUTION : A thermal power generator and a Carnot's cycle generator are installed together. While controlling the temperature of flow-out sea water which is discharged from a condenser of the thermal power generator properly, heat is stored as a heat source for area-wide air conditioning after it is used as a heating source of an evaporator of the Carnot's cycle generator. On the other hand, cold sea water in the proper layer of the Kurile Current is stored as a heat source for area-wide air conditioning after it is used as cooling heat source of a condenser of the Carnot's cycle generator. Consequently, it is possible to utilize power generation energy of two generators of different types efficiently.	SAWADA NAOHISA	JP04339422	1992/11/7

143	CONVECTION TYPE TEMPERATURE GRADIENT PRIME MOVER	PURPOSE : To perform a heat exchange with gas intact without being liquefied and evaporated. CONSTITUTION : This prime mover is provided with each of spiral pipelike cooling passages 20, 22 for gas cooling and heating passages 24, 26 for gas heating to be cooled or heated by two cooling pipes 14, 16 for cooling water feeding and a heating pipe 18 for hot water feeding installed in a cylinder 12. In this constitution, the gas heated by the heating passages 24, 26 on one side is taken into the cooling passages 20, 22, while the gas cooled in the cooling passages 20, 22 on the other is taken into the heating passages 24, 26, circulating both these heated and cooled gases with each other, and then each of fans 28a, 28b and 29 is rotated by dint of a convection current produced by temperature difference between both aforesaid gases.	IKEDA TAKESHI; ABE TOSHIHIRO	JP04326138	1992/11/11
144	OCEAN THERMAL ENERGY CONVERSION DEVICE	PURPOSE : To decrease a loss factor of plant-home use by driving hot and cold water pump by turbines, and providing a separate cycle from that for driving a generator, to improve heat cycle efficiency. CONSTITUTION : When hot seawater in an oceanic surface is successively fed to evaporators 3a, 3b, 3c by a hot water pump 2, operating media 4a, 4b, 4c of low boiling point are heated by the hot seawater and evaporated. This medium steam is guided to turbines 5a, 5b, 5c, to drive the hot water pump 2 by the turbine 5a, generator 6 by the turbine 5b and a cold water pump 9 by the turbine 5c. The medium steam of decreasing pressure and temperature by giving energy is advanced into condensers 7a, 7b, 7c, cooled by cold seawater 8 fed from the cold water pump 9 and successively condensed to become media liquid, and it is returned respectively to the evaporators 3a, 3b, 3c by media pumps 10a, 10b, 10c. In this way, evaporating and condensing temperatures of the operating media can be generated to approach a heat source temperature in high and low temperature sides, and heat cycle efficiency of a generating unit can be improved.	TOSHIBA CORP	JP04147063	1992/6/8

145	Fuciformis intrusion prevention device	Purpose : to, sea water in a thermal power plant or the like attached to the intake port, to prevent the entry of fuciformis equipped with a device for preventing intrusion fuciformis net, especially from the surface of the water in order to eliminate fuciformis eliminating fuciformis entry prevention device which incorporates an fuciformis occurs. Constitution : mounted on the intake port 10, such as seawater in preventing entry fuciformis, opening the intake port 10 mounted on the side of the lower end side ceanic ocean side inclined face and is stretched on the seabed, and between the lower edge of the opening 4 is formed and for preventing entry of network 1 fuciformis, intake port ceanic side opening 10 which is attached to the one side end of the flow generating device is provided for eliminating fuciformis 7 and, on the opening section 4, a large number of flow guide plate 8, their upper edge by water flow in a downstream direction of the flow generating device at the same inclined angle of the inclined face, and provided at a constant interval by, during operation of a stream generator for eliminating fuciformis 7, from the opening 4 and eliminating most of the inflow of water, from the opening portion 4 so as to prevent entry of fuciformis.	ADVANCED N M R SYST INC	JP03075155U	1991/8/26
146		An ocean thermal energy conversion system includes a mass of expandites that change density in response to changes in temperature at a given pressure to thereby change buoyancy with respect to ocean water; a mass transport conduit circuit for introducing the expandites to ocean water at different combinations of temperature and pressure and transporting the expandites and ocean water in response to pressure differentials created by density changes and concomitant buoyancy changes of the expandites as the expandites are exposed to ocean water at different combinations of pressure and temperature; and a transducer such as a turbo-electric generator for converting the pressure of water transported by the circuit to electrical energy. Expandites are defined as separate objects that expand or contract when heated or cooled, thereby changing their density. The disclosed expandites includes substances encased in plastic bags, such as ammonia which expands upon undergoing a phase transformation upon going from a liquid to a gas, and nitro benzene which expands upon undergoing a phase transformation from a liquid to a solid.	SORENSEN JENS OLE	JP55041262	1980/4/1

147		A temperature difference heat engine to be used as a power source for marine temperature difference power generation, pumping-up of eutrophied seawater, and digging of submarine resources, which utilizes thermomechanical solid phase transformation of a shape memory alloy. This engine is composed of an engine body (1) and a heat conductive medium (2), in which the engine body comprises a belt-like body (6) made of a shape memory alloy and passed around pulleys (3), (4), and (5) respectively positioned at three apexes (A), (B) and (C) of a right triangular base frame. The heat conductive medium is constituted of liquid or gas having a certain temperature gradient in the vertical direction. The engine body is attitude-controlled so that the whole or a part of one of the sides forming the right angle of the right-triangular belt-like body extends in approximately vertical direction in the heat conductive medium, whereby reversible elongation and contraction resulting from thermomechanical solid phase transformation are repeatedly applied to the belt-like body at portions between pulleys and thus rotational driving power can be generated in the belt-like body.		JP01130643U	1989/11/9
148	KAIYOONDOSAHATSUDENPURANTOFUTAINOTEIIHOHO	PURPOSE : To locate the buoyant body, accommodating equipments for the ocean temperature difference power plant, at a predetermined position in the ocean by a method wherein the flow speed of discharging hot discharging water, taken from the ocean, is controlled to generate a thrust for the buoyant body and is made to oppose the thrust against a drag acting on the buoyant body. CONSTITUTION : The main body 4 of the buoyant body is formed so as to have the shape of ship as a whole in order to increase the efficiency of propulsion effected by the discharging flow and the bow of the body is provided with a hot seawater intaking port 1. The seawater, discharged out of a discharging port 3, released a part of heat in the power plant 2, the flow speed V3 at the discharging port is higher than the inflow speed V1 at the intaking port, and the buoyant body keeps a predetermined position with respect to the land at all times by the thrust m(V3-V1), generated by the difference between both flow speeds. Here, m represents the flow amount of seawater at the intaking port in mass.	UCHIDA MOTOTOSHI	JP57127490	1982/7/23

149	METHOD OF UTILIZING HEAT ENERGY OF ENVIRONMENTAL FLUID	PURPOSE : To utilize low level thermal energy fluid by cooling a thermal source fluid with a first heat exchange means and a turbine, and applying the cooled thermal source fluid for cooling a working fluid with a second heat exchange means. CONSTITUTION : Such system as ocean thermal energy conversion system, atmosphere thermal energy conversion system etc., as a closed cycle system, has a prime mover M, a first and a second heat exchange means AB, CD and a cooling apparatus (turbine) N. While a thermal source fluid conducts the heat to the working fluid of a prime mover M, the thermal source fluid itself is cooled. And, the thermal source fluid is further cooled by a cooling apparatus N. The cooled thermal source fluid is employed to cool the expanded working fluid of the prime mover M by a second heat exchange means CD.	YAN CHIYAN	JP63316053	1988/12/14
150		A combination power plant including an ocean thermal energy conversion power plant and a steam generation power plant. Water discharged from a condenser in the ocean thermal energy conversion power plant is mixed with water discharged from an evaporator in the ocean thermal energy conversion power plant. The mixed water is used as cooling water for a condenser in the steam generation power plant. Part of the water discharged from the condenser in the steam generation power plant is used as heating water for the evaporator in the ocean thermal energy conversion power plant.	TOKYO SHIBAURA ELECTRIC CO	JP56041239	1981/3/20

151	MULTIPUPOSE OPEN TYPE OCEAN THERMAL ENERGY COMPOUND GENERATING METHOD AND GENERATING SET	PURPOSE : To dispense with any exhaust power for noncondensable gas by expanding water vapor generated by heating warm seawater in a high pressure turbine, leading the exhaust vapor into a deaerator, and separating air from the exhaust. CONSTITUTION : Seawater heated by a warm seawater heater 13 generates high pressure vapor in a high pressure flash evaporator 15, feeding this vapor to a high pressure steam turbine 16, thereby driving this turbine. Exhaust vapor out of this high pressure steam turbine 16 feeds hot water 17 coming out of the high pressure flash evaporator 15 to a medium pressure flash evaporator 18, and it is fed to a deaerator 19 together with vapor to be obtained by evaporation hereat. This deaerator 19 consists of a condensing part and an evaporating part, and it is constituted so as to be operated by pressure slightly higher than atmospheric pressure. With this constitution, only water vapor excluding air can be fed to a medium pressure steam turbine 22.	MORI YASUO	JP62314191	1987/12/14
152	CONSTRUCTION OF COOLING WATER GUIDE CHANNEL FOR	A cold water conduit (50) for use with an ocean thermal energy conversion plant is formed by drilling and blasting at least one passageway completely through an underwater land formation (10) from an underwater land shelf (12) to an underwater land slope (14).	MACDERMID INC	JP57047495	1982/3/26

153		PURPOSE : To improve thermal efficiency by using sea water used for cooling and condensing exhaust from a turbine in a power plant utilizing temperature difference in ocean for cooling water for a condenser cooling and condensing exhaust from a steam turbine in steam power plant. CONSTITUTION : A generation system is constituted from a generating section 10 utilizing temperature difference in ocean and a steam power gererating section 30. A warm sea water pump 11 supplies warm sea water in the upper layer of the ocean to an evaporator 12 to heat and vaporize low boiling point medium. The vaporized medium is introduced into a turbine 13 and expanded to generated power with a generator 14. Exhaust from the turbine 13 is cooled and liquefied by a condenser 15 to which cooling sea water taken out of the lower layer of the ocean is supplied by a pump 17 for cooling water. The steam power generating section 30 is constituted from a steam genreator 31, turbine 32, condenser 34, etc. and cooling drain of the condenser 15 in the ocean section 10 is supplied to the condenser 34 by a pump 36 for cooling water.	HITACHI LTD	JP55134360	1980/9/29

154	COATING METHOD FOR SURFACE OF OCEAN STRUCTURAL MEMBER	PURPOSE : To form the coated layer of Cu alloy excellent in corrosion resistance and stainproof properties without increasing water resistance in the period of a voyage by thermally-spraying an insulating material or a sacrificing anode material on an ocean structural member such as the outside plate of a hull and thermally-spraying the coating material of Cu alloy thereon to smooth the surface. CONSTITUTION : The coated layer of Cu alloy such as Cu-Ni which is exellent in the corrosion resistance and the stainproof properties in the ocean is formed in order to increase the corrosion resistance and the stainproof properties (the adhesion preventive properties for the marine organisms) of the ocean structural member such as the outside plate of the hull of a ship. In such a case, an insulating material such as Al2O3 and TiO2 or the sacrificing anode material 2 such as Zn, Al and Sn is thermally sprayed on the surface of the steel plate 1 of the outside plate of the hull, heated and melted to form a middle layer 3. Then after forming a Cu alloy layer 4 excellent in the corrosion resistance and the stainproof properties such as Cu-Ni, Cu-Sn-Zn-Al with the plasma thermal spray or the like, this layer 4 is heated and melted to seal the holes and an external coated layer 5 due to Cu alloy having the smooth surface is formed.	KOBE STEEL LTD	JP60078206	1985/4/11
155		PURPOSE : To raise the efficiency of power generation utilizing, for instance, the small temperature difference of sea water, by reducing the resistance of heat transfer remarkably simply by applying a heat-conductive grease to the contact surfaces of heat exchanger tubes and fins. CONSTITUTION : A grease having a high heat conductivity is applied to the contact surfaces of heat exchanger tubes 9, 10 and fins 7, whereby air gaps are filled up and the heat exchanger tubes 9, 10 and the fins 7 are lubricated so that they can be moved freely relatively to each other. By the function of the grease, it is enabled to reduce the resistance of heat transfer and to prevent generation of stress even if the difference of thermal expansion is caused between them. At the same time, it is enabled to prevent damages of thermoelectric sub-modules themselves, at the contact parts of the thermoelectric sub- modules and at soldered parts, etc. Here, the heat-conductive grease used for this purpose is required to have a high viscosity and a high specific volume resistivity and to have low separatability and vaporization factors.	KOGYO GIJUTSUIN	JP57033089	1982/3/4

156	METHOD OF TREATING NOXIOUS WASTE AND SEA BOAT FOR INCINERATING SAID WASTE	A method and an ocean-going vessel are disclosed for more effectively incinerating hazardous liquid wastes at sea. Intermodal shipping tank containers are filled at waste generation sites; transported to dockside and loaded above decks on an incinerator ship; taken out to sea and incinerated in horizontal, liquid burning type incinerators so that the effluents emerge horizontally. Wastes flow by gravity from containers into staging sumps located below decks, and then pumped to incinerator. Pollution abatement tanks, also below decks, collect spilled waste from containers, as well as overflow from staging sumps. Material collected in abatement tanks is pumped into staging sump, and pumped to incinerator. Fuel oil may be introduced into sumps for fueling incinerators to maintain incinerator operation when there is insufficient supply of waste. Effluents are sea-water scrubbed for cooling to eliminate thermal lift and carried promptly into sea.	BINSENTO JII GUREI	JP60095703	1985/5/7
157	OCEAN THERMAL GENERATION SET	PURPOSE : To improve operation efficiency and clean evaporators interchangeably by installing two units of evaporators and condensers in parallel and operating only one unit in low loading. CONSTITUTION : Two units of evaporators and condensers of an ocean thermal generation set A are provided. Two evaporators 1-1 and 2-2 and two condensers 3-1 and 3-2 are connected in parallel. Valves 15-1 and 15-2, etc. are installed onto the evaporators 1-1 and 1-2, and one unit is operated in low loading at night by switching the valves. Also the condensers 3-1 and 3-2 are constituted similarly. Into the evaporator 1-1 in repose, a portion of the cold seawater is allowed to flow backward from a pump 6 by opening the valves 24-1 and 26-1. The evaporator 1-1 is operated and the evaporator 1-2 is put into repose by switching the operation. Therefore, the evaporators can be cleaned.	SAGA DAIGAKU	JP59075788	1984/4/17

158	CONTROLLER IN OCEAN THERMAL POWER GENERATION	PURPOSE : To improve the following performance and stability in output control by inputting the external factors which can not be controlled artificially such as each temperature of warm and cold seawater and the outside air temperature, etc. and calculation-processing these factors by a microcomputer. CONSTITUTION : The sensors 19W24 for quantitatively detecting the temperature and the flow rate of warm and cold seawater and working fluid are provided. Further, the sensors 25 and 26 for detecting the outside air temperature and the output of a power generator are provided. The signals supplied form these sensors 19W26 are processed and input into a microcomputer 34. Calculation-processing etc. are performed according to the operating system memorized into a ROM36. Control signals are outputted according to the control program memorized into a RAM37 according to the output of the results. The driving electric power for the driving motors 11W13 for the pumps is controlled according to the control signals.	SAGA DAIGAKU	JP59075789	1984/4/17
159		A geothermal energy recovery system of improved efficiency makes use of thermal energy stored in hot, solute-bearing well water as it is pumped upward to the earth's surface through an extended heat exchange element for continuously heating a downward flowing organic fluid to a supercritical state. Some of the energy of the latter fluid is used within the well for operating a turbine-driven pump for pumping the hot, solute-bearing well water at high pressure and always in liquid state to the earth's surface, where it is reinjected into the earth in another well. The temperature difference between the upward flowing brine and the downward flowing organic fluid is maintained finite in a predetermined manner along the subterranean extended heat exchange element. After driving the deep-well turbine-driven pump, the organic fluid arises to the earth's surface in a thermally insulated conduit; at the earth's surface, vapor turbine electrical power generation equipment is driven by the heated organic fluid which is then returned into the well for reheating in the extended heat exchanger.	ABERCOM AFRICA LTD	JP52038174	1977/4/5
160	The roller - nitroso -	The present Publication SUMMARY data for electronic application before the application data recorded on the oxygen in air.	大山 清廣	JP58195255U	1983/12/19

161	The upper end of the tube connecting device assembled floating structure	Apparatus is provided for connecting to a floating structure the upper end of a pipe assembly disposed substantially vertically in an ocean and the like. The pipe can be an upwelling pipe in an ocean thermal energy conversion installation. Gimbal apparatus are coupled between the pipe and the structure concentrically about the pipe. The gimbal apparatus define two orthogonal gimbal axes about which the pipe can move relative to the structure. The gimbal apparatus carry essentially all of the load between the pipe and the structure. Ball joint apparatus are coupled between the upper end of the pipe and the structure to define the boundaries of a path of fluid flow between the pipe and the structure. The ball joint apparatus includes an element associated with the pipe and an element associated with the structure. The ball joint apparatus is centered in the intersection of the gimbal axes.	GLOBAL MARINE INC	JP54106551	1979/8/20
162	The upper end of the tube assembly and a connecting device for separating floating structure	Apparatus is provided for connecting to a floating structure the upper end of a pipe assembly disposed substantially vertically in an ocean or the like. The pipe can be an upwelling pipe in an ocean thermal energy conversion installation. A downwardly open, elongate hollow socket is connected to the structure, and a mating elongate hollow pin member is connected to the upper end of the pipe assembly. Mating of the pin member in the socket requires only upward linear motion of the pin into the socket. Separate tethers are connectible in parallel to the pin and socket between the pipe assembly and the floating structure for holding the pin member in mated engagement with the socket. The tethers are severable for releasing the pipe assembly, which is negatively buoyant, from the floating structure in the event of an emergency or otherwise.	GLOBAL MARINE INC	JP54106552	1979/8/20

163	ASSEMBLED WATER PIPE UNIT FOR MARINE ENGINEERING	In an ocean thermal energy conversion facility, a cold water riser pipe is releasably supported at its upper end by the hull of the floating facility. The pipe is substantially vertical and has its lower end far below the hull above the ocean floor. The pipe is defined essentially entirely of a material which has a modulus of elasticity substantially less than that of steel, e.g., high density polyethylene, so that the pipe is flexible and compliant to rather than resistant to applied bending moments. The position of the lower end of the pipe relative to the hull is stabilized by a weight suspended below the lower end of the pipe on a flexible line. The pipe, apart from the weight, is positively buoyant. If support of the upper end of the pipe is released, the pipe sinks to the ocean floor, but is not damaged as the length of the line between the pipe and the weight is sufficient to allow the buoyant pipe to come to a stop within the line length after the weight contacts the ocean floor, and thereafter to float submerged above the ocean floor while moored to the ocean floor by the weight. The upper end of the pipe, while supported by the hull, communicates to a sump in the hull in which the water level is maintained below the ambient water level. The sump volume is sufficient to keep the pipe full during heaving of the hull, thereby preventing collapse of the pipe.	GLOBAL MARINE INC	JP54107050	1979/8/21

164	2 - phase flow type automatic [punsaikuru[punsaikuru] ocean thermal power generation method	PURPOSE : To miniaturize a system available, by installing a two-phase flow generator in position between an evaporator and a turbine, in case of an open cycle marine temperature difference power generation. CONSTITUTION : Hot seawater 1 is deaerated at an deaerating chamber 2 and partially turned into steam by an evaporizer 3. Hot seawater 4 whose temperature gets dropped is exhausted outside. The steam enters a 2-phase flow generator 6. In this 2-phase flow generator 6, a liquid-drop group is produced and simultaneously a part of steam kinetic energy is given to this liquid-drop group. The 2-phase flow is made to increase intensity of its energy and provides an electric output to the external in such a way, as turning a generator 8 upon being led by a 2-phase flow turbine 7. The 2-phase flow, which has performed its job, is drawn into a condenser 9 and turned into a condensate water by an abyssal cooling sea-water 10. A part of the condensate water is returned to the 2-phase flow generator 6 by means of a pump 11. The rest is applied to other application purposes as a fresh water source.	KOGYO GIJUTSUIN	JP56093245	1981/6/17
165	Energy Utilization Method Using Phase Change		NIPPON SEKYU HANBAI KK	JP51024092	1976/3/8
166	FLUSH EVAPORATING METHOD AND DEVICE FOR LIQUID	A vertical tube flash evaporator for introducing a superheated liquid into a flash evaporation chamber includes a vertical inlet tube with a flared diffuser portion at its upper outlet end. A plurality of annular screens are positioned in axially spaced-apart relation to each other around the periphery of the vertical tube and below the diffuser portion thereof. The screens are preferably curved upward in a cup-shaped configuration. These flash evaporators are shown in an ocean thermal energy conversion unit designed for generating electric power from differential temperature gradients in ocean water. The method of use of the flash evaporators of this invention includes flowing liquid upwardly through the vertical tube into the diffuser where initial expansion and boiling occurs quite violently and explosively. Unvaporized liquid sheets and drops collide with each other to enhance surface renewal and evaporation properties, and liquid flowing over the outlet end of the diffuser falls onto the curved screens for further surface renewal and evaporation.	US GOVERNMENT	JP59038471	1984/2/29

167	Temperature difference power	The present Publication SUMMARY data for electronic application before the application data recorded on the oxygen in air.	三菱電機株式会社	JP58059555U	1983/4/19
168	INBOARD DISTRIBUTION NETWORK CONNECTING FEED DEVICE	1. Arrangement for the board mains supply in a polyphase alternating current ship's drive of variable frequency with a propulsion generator (3) driven by a primary energy converter (2), a starting-up inverter (5 to 8) and a propeller motor (1) fed at a constant ratio of voltage to frequency, wherein the propeller motor (1) is connected - in a lower rotational speed range at constant minimum rotational speed of the primary energy converter (2) - by way of the starting-up inverter (5 to 8) and - in the range above the minimum rotational speed - directly with the propulsion generator (3) in the manner of an electrical shaft, characterized by an arrangement for the continuous energy supply for the board mains by the primary energy converter (2), wherein board mains frequency and voltage are supplied in the lower rotational speed by the propulsion generator (3) by way of a transformer (4) between propulsion rail and board mains rail or from a further generator (9) coupled to the propulsion generator (3) and wherein - in the range above the minimum rotational speed - the starting-up inverter (5 to 8) is separated from the propeller motor (1) and connected with the interposition of a synchronous phase changer (12) to the board mains.	LICENTIA GMBH	JP59054608	1984/3/23

169	Water flow assembly tube marine engineering	In an ocean thermal energy conversion facility, a cold water riser pipe is releasably supported at its upper end by the hull of the floating facility. The pipe is substantially vertical and has its lower end far below the hull above the ocean floor. The pipe is defined essentially entirely of a material which has a modulus of elasticity substantially less than that of steel, e.g., high density polyethylene, so that the pipe is flexible and compliant to rather than resistant to applied bending moments. The position of the lower end of the pipe relative to the hull is stabilized by a weight suspended below the lower end of the pipe on a flexible line. The pipe, apart from the weight, is positively buoyant. If support of the upper end of the pipe is released, the pipe sinks to the ocean floor, but is not damaged as the length of the line between the pipe and the weight is sufficient to allow the buoyant pipe to come to a stop within the line length after the weight contacts the ocean floor, and thereafter to float submerged above the ocean floor while moored to the ocean floor by the weight. The upper end of the pipe, while supported by the hull, communicates to a sump in the hull in which the water level is maintained below the ambient water level. The sump volume is sufficient to keep the pipe full during heaving of the hull, thereby preventing collapse of the pipe.	GLOBAL MARINE INC	JP54107050	1979/8/21

170	As a method for generating mechanical power utilizing waste heat	PURPOSE : To obtain efficient power in such a way that it is constituted by a relation in which a steam turbine is driben by making one heat medium into a super-critical condition through a heat exchange tower via an air-cooled condenser, and by a relation in which the other heat medium is induced from above the tower into a turbine water mill. CONSTITUTION : On heat medium in a heat exchanger 3 in a tower 1 has a relation formed in such a way that it is made into a state of super-criticalness 9, and induced into a turbine while it is cooled, and condensed, and flowed down into the heat exchanger 3. The other medium has a relation formed in such a way that it goes up along the tower-shaped heat exchanger 3, flows down from the vicinity on the top of the tower, turns a turbine water mill 4, and drives a pump 2. The latter relationship can utilize for example sea water or temperature difference of the waste heat, by which the obtained thermal energy is effectively utilized in the former relation. Further, for example, utilization of inclines of mountain and of hill, and installation of heat exchanger 3, etc. along such an incline enable savig construction cost without any colossal tower.	KOGYO GIJUTSUIN	JP56153505	1981/9/28
171	Drive device utilizing		MUNEKATA FUMIO	JP49065024	1974/6/10
172	MIST FLOW TYPE HEAT ENERGY TRANSDUCER	An ocean thermal energy converter (OTEC) generates electricity from warm surface water in dropping 100 meters or so, and then raises it back to the surface using its own thermal energy in a large floating vacuum chamber. The mist flow process as described in U.S. Pat. No. 4, 216, 657 is employed to accelerate water droplets and water vapor upward from the bottom of the chamber under a pressure difference created by spraying cold water from lower ocean levels into the same chamber. The cold water is sprayed upward and parallel to the upper side walls of the chamber to control the flow of the warm droplets, as well as condense the vapor. This cold spray has too small an initial velocity to reach the top of the chamber, but receives momentum from the accelerated warm droplets. The warm water may be injected substantially vertically or alternatively at an angle inclined toward the axis of the chamber to assist in coalescing and concentrating the stream after the individual droplets have been accelerated upward.	AARU ANDO DEII ASOSHIEITSU INC	JP58049035	1983/3/25

173	Sea water temperature	The present Publication SUMMARY data for electronic application before the application data recorded on the oxygen in air.	三井造船株式会社	JP56164034U	1981/11/2
174	SEA-BOTTOM PIPELINE LAYING METHOD USING MARINE RAIL SYSTEM	A submarine cold water conduit (50) for use with an Ocean Thermal Energy Conversion (OTEC) fossil or nuclear power plant (102) is installed by fitting a marine railway system on the floor (12) of a body of water (11) and subsequently using the railway system as an aid to the installation of the cold water conduit (50) and a support structure for the conduit.	MACDERMID INC	JP57092252	1982/6/1
175	FACILITIES FOR COAL RELAY STATION AND ASH DUMPING POND	PURPOSE : To facilitate a joint use of a cargo handling gear and to transport coal ash on a return voyage of a domestic vessel having transported coal to a thermal power plant etc. by arranging a coal relay station and an ash dumping pond adjacently by a proper means. CONSTITUTION : Coal transported from a place of production by a large ocean going vessel 4 is efficiently unloaded onto a coal storage barge 101 by use of a cargo handling gear such as its unloader 5, and is stacked in coal storage hatches of individual coal storage barges 101, 102, 103. When coal is to be supplied to a thermal power plant, etc., the coal is loaded from individual coal storage hatches 3 into a small domestic vessel 22 brought alongside the coal storage barge 102 jointly used for a withdrawal berth by use of a cargo handling gear for withdrawal such as a ship loader 23, etc. This small domestic vessel 22 transports coal ash produced at the thermal power plant, etc. on its return voyage, and the coal ash is unloaded by use of an unloader 5, etc. and is dumped in an ash dumping pond 201.	MITSUBISHI HEAVY IND LTD	JP56102073	1981/6/30
176		A method and apparatus for transferring cold seawater from lower ocean depths upward toward sea level for use in ocean thermal energy conversion systems is disclosed wherein an in situ desalination process is utilized to create a density differential between the desalinated water and the surrounding seawater. The desalinated water being of a lesser density than the surrounding seawater, rises naturally upward through a conduit and is utilized as a heat transfer medium in the ocean thermal energy conversion system. The desalinated water, which is a byproduct of the energy conversion system, may be utilized for domestic consumption or alternatively dispersed into the near surface region (photic zone) of the ocean to increase the nutrient concentration therein.		JP56500907	1981/2/18

177		PURPOSE : To generate electric power through the medium of a closed coolant line containing a turbine, by utilizing the fact that there is a relatively large temperature difference between a deep portion and a shallow portion of stored water in a dam etc.		JP52058731	1977/5/23
178	BUILTTUP PIPE DEVICE	An ocean thermal energy conversion facility includes a long pipe assembly which is supported at its upper end by the hull of the floating facility. Cold water flows to the facility from deep in the ocean. The pipe assembly comprises an elongate pipe construction and a weight connected to the lower end of the construction by a line of selected length. A floatation collar is connected to the construction at its upper end to cause the construction to have positive buoyancy and a center of buoyancy closer to the upper end of the construction than its center of mass. The weight renders the entire pipe assembly negatively buoyant. In the event that support of the pipe assembly should be lost, as by release of the assembly from the facility hull in an emergency, the assembly sinks to the ocean floor where it is moored by the weight. The pipe construction floats submerged above the ocean floor in a substantially vertical attitude which facilitates recovery of the assembly.	GLOBAL MARINE INC	JP54107049	1979/8/21
179	OCEAN HEAT ENERGY CONVERTER	A power generation system and method of operation for generating electricity by utilizing temperature differences inherently present in the ocean between water near the surface and water from the ocean's depths. A pump provides relatively warm, surface ocean water to a flash evaporator where a portion of the water is flashed into steam. The steam is expanded through a subatmospheric pressure range turbine which exhausts into a condensing enclosure. The steam exhausting into the enclosure is condensed by relatively cold ocean water pumped thereinto. The turbine drives a generator and thus produces the electricity. The turbine speed and generator output are controlled by selectively introducing atmospheric air and relatively warm water into the exhausted motive steam flow. Such selective introduction into the exhausted steam flow of air and/or relatively warm water increases the absolute pressure at the turbine's exhaust end and thus reduces steam flow through the turbine. Adjusting regulating valves for the air and warm water flows in response to changes in turbine speed and/or generator load provides means for regulating the speed of the turbine and generating load.	WESTINGHOUSE ELECTRIC CORP	JP54078224	1979/6/22

180		PURPOSE : In the operation method of a marine generating set that utilizes the temperature difference of sea surface and sea depths, variable speed pumps are used as a sea surface warm water-intake pump and a sea depths cold water-intake pump, both of which starting are performed at low speed condition, ensuring the minimum capacity of the extra power source for starting.		JP50089325	1975/7/22
181		PURPOSE : To enable power generation at a generally high efficiency by employing an improved power generating method wherein power generation is effected first by utilizing the difference of temperatures between warm sea water near the surface and cool sea water at a deep level of the sea and subsequently by utilizing the differnece of densities between fresh water and sea water obtained from the first power generation.		JP52032283	1977/3/25
182		1, 226, 035. Liquefied gas storage containers. CONCH OCEAN Ltd. 18 Sept., 1968 [12 Oct., 1967], No. 44324/68. Heading F4P. A non-self supporting fluid-tight cold-resistant flexible membrane tank 6 right hand side of Fig. 1, is supported against internal loads by a surrounding solid thermal insulation 5 which is itself supported by a rigid shell 2, e.g. the inner hull of a tanker and the membrane tank 6 is anchored to the insulation by rigid anglesectioned members 19, Fig. 5, which extend along and are secured to the junction of adjacent side top and bottom walls of tank 6 and referred to as corners, and members 19 are also rigidly secured to the corners of the insulation 5. The membrane tank is formed of nickel-steel corrugated sheets 16 and corrugated dihedral corner-pieces 17 and trihedral corner-pieces 171, Fig. 4, to which are welded the angled anchor members 19 along regularly spaced intervals along the lengths of the corners of the membrane tank. Members 19 are bolted to spaced hardwood blocks 21, 22, adhesively secured to insulation panels 8 constructed as described in Specification 951, 923. The spaces between adjacent hardwood blocks is occupied by balsa wood blocks 23. A modified membrane tank 41, Fig. 10, has stepped top and side walls providing internal entrant corners a and external re-entrant corners b.		JP43072928	1968/10/8

183	DYNAMIC FORCEELIKE POSITIONING DEVICE OF SHIPING PROVIDED WITH SEAWATER THERMAL ENERGY TRANSDUCER	A dynamic positioning system for a sea-going vessel containing an ocean thermal energy conversion (OTEC) system utilizes the thrust produced by the sea water effluents resulting from the energy conversion process to position the vessel against wind and ocean current forces. In one preferred embodiment applicable to both cylindrical surface and spar buoy types of vessels, both the warm water and cold water discharges are collected in a common annular plenum and then discharged through nozzles spaced angularly around the periphery of the plenum. Each nozzle is rotatable through a 90 DEG arc in a vertical plane to alter the direction of the discharge water jet and thereby to alter the horizontal component of the thrust or the driving force acting upon the vessel. The nozzles may be selected as to location and angular orientation to attain the net resultant force vector necessary to provide station-keeping or propulsion to the vessel under most any combination of wind and ocean current conditions.	TRW INC	JP52049740	1977/4/28