

序号	标题	摘要	申请人	申请号	申请日
1	POWER SYSTEM FOR SHIP	A marine power system is initiated. Marine power system according to this embodiment is provided in the main engine connected to the propulsion device, the first euro supplying the high temperature compressed air generated from the turbocharger to the main engine, the second euro and the first euro for discharging the high temperature exhaust generated from the combustion engine, it may be provided including the first thermal module developing through the cooling medium and the high temperature compressed air.	삼성중공업 주식회사	KR1020200118502	2020/9/15
2	Energy saving apparatus for driving cargo hold fan	The present invention relates to an energy saving apparatus for driving a cargo hold fan, comprising : a first variation control board (20) connected to allow individual driving with respect to a plurality of air supply motors (11); a second variation control board (30) connected to allow individual driving with respect to a plurality of air discharge motors (12); and a control means detecting operation environment of the cargo hold and applying a set output corresponding to the detection to the air supply motor (11) and the air discharge motor (12). Accordingly, the present invention is configured to be able to optimally design and drive a fan installed in a cargo hold of a container ship such that energy can be saved and, at the same time, damage to cargo due to mishandling of the ship by an operator can be prevented in advance.COPYRIGHT KIPO 2017	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020150158726	2015/11/12
3	THERMOELECTRIC GENERATION SYSTEM FOR SHIP	A marine thermoelectric power generation system of the present invention is disclosed. According to one aspect of the present invention, ship engine; Turbo superchargers that produce compressed air using exhaust gas from ship engines; And includes an air cooler for cooling the compressed air installed in the flow line of the compressed air produced in the turbo supercharger, and the air cooler may be provided with a marine thermoelectric power generation system comprising a cooling module for cooling the compressed air by supplying the coolant discharged from the heat transfer module, and the heat dissipation module developed by the temperature difference of the coolant flowing inside and the compressed air flowing outside.	삼성중공업 주식회사	KR1020200112834	2020/9/4

4	THERMO-ELECTRIC GENERATION SYSTEM FOR SHIP	<p>A marine thermoelectric power generation system is initiated. According to this embodiment, the thermal power generation system for ships is Each is connected to the plurality of combustion engines, each of which is connected to a plurality of exhaust gas euros from the plurality of combustion engines, and the connecting core connecting the downstream point of the plurality of exhaust gas oils so that the exhaust gas emitted from the plurality of exhaust gas oils is joined, and is connected to the connecting core, the exhaust gas emitted from the connecting core to the outside and the cooling medium and the thermal module developed by the temperature difference of the exhaust gas emitted from the connecting core may be provided.</p>	삼성중공업 주식회사	KR1020200110315	2020/8/31
5	Thermoelectric generation system for ship	<p>A marine thermoelectric power generation system is provided by an embodiment of the present invention. A marine thermoelectric power generation system according to an embodiment of the present invention, a gas returnor for accepting emissions from the combustion engine and the combustion engine, and a first exhaust pipe and a second exhaust pipe that discharges the exhaust gas to the outside, respectively, connected to the gas return. It is installed on the first exhaust pipe, and is installed in an intercooler, and an intercooler that generates compressed air by rotating the compressed air at the pressure of the first exhaust gas flowing the first exhaust pipe, and supplies the compressed air to the intake pipe of the combustion engine, and is installed on the intake pipe, and the intercooler to cool the compressed air by circulating the refrigerant, including a thermoelectric module developed by the temperature difference between the refrigerant and the compressed air, The second exhaust pipe may be selectively opened in response to the load level of the combustion engine.</p>	삼성중공업 주식회사	KR1020200113259	2020/9/4
6	A Regasification System Of Gas and Vessel having same	<p>According to the present invention, a regasification system of gas comprises : a gasification device regasifying liquid gas stored in a liquid gas storage tank to be supplied to a consumer; and a heat source supply device transmitting a circulating heat source to the gasification device while a phase thereof is changed. The heat source supply device has a foreign substance removing device to increase purity of the heat source.</p>	한국조선해양 주식회사; 현대중공업 주식회사	KR1020160115503	2016/9/8

7	INTKAE AND EXHAUST SYSTEMS IN VESSEL UTILIZING THERMOELECTRIC	An in-ship intake system utilizing thermoelectric power is initiated. The system, exhaust gas flowing exhaust gas discharged from the engine contained in the vessel; The intake gas flowing from the outside of the vessel; Having a high temperature surface and a low temperature surface, including a thermal power generation module	삼성중공업 주식회사	KR1020200111241	2020/9/1
8	VESSEL SYSTEM UTILIZING THERMOELECTRIC POWER GENERATION	A ship system utilizing thermoelectric power is launched. The system, exhaust gas flowing exhaust gas discharged from the engine contained in the vessel; Scrubbers that reduce the emissions generated by the exhaust pipe; It comprises a high temperature surface and a low temperature surface	삼성중공업 주식회사	KR1020200111249	2020/9/1
9	ATOMIC REACTOR PASSIVE COOLING INSTALLATION OF SHIP	The present invention relates to a nuclear reactor pulsating equipment of the ship, according to one aspect of the present invention, a reactor in which heat is generated; Heat of the medium transmitted in the reactor is transmitted to remove the heat of the medium, and a thermoelectric generator for producing power using the heat and seawater of the medium; And comprises an ice-based storage tank for cooling the seawater supplied to the thermoelectric generator, the seawater supplied to the thermoelectric generator, if the heat transmitted from the reactor is more than a certain temperature is supplied to the seawater of the sea, and if the heat transmitted from the reactor is less than a certain temperature, the fidescent cooling equipment of the reactor is supplied with the cooled seawater in the ice storage tank, it may be provided.	KOREA ATOMIC ENERGY RES	KR1020200124062	2020/9/24
10	Water-bulbodies	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).	MITSUI O S K LINES LTD	KR1020217038618	2020/5/27

11	Eco-friendly power generation apparatus using waste heat of vessel funnel	<p>The present invention relates to an eco-friendly power generation apparatus using waste heat of a vessel chimney (10) which comprises : a filtration tank (20) which is installed on the chimney (10) to receive exhaust gas and stores filtration water (22) for adsorbing dust; an exhaust tank (30) which is accommodated on the filtration tank (20) and discharges the exhaust gas having passed through the filtration water (22); and a recollection means (40) which generates electricity by using thermal energy of the filtration water (22). Accordingly, electricity can be generated and supplied by using waste heat of the vessel chimney, and energy efficiency of a vessel can be increased. The eco-friendly power generation apparatus using waste heat of a vessel chimney removes soot and dust, generated from the chimney, and thus has an eco-friendly effect.</p>	대우조선해양 주식회사	KR1020150134 445	2015/9/23
12	Combined plant of power generation, desalination and cooling system using ship unused heat	<p>The present invention relates to marine non-active heat generation, fresh water and cooling composite plants, more specifically, as a composite plant that allows the use of marine waste heat through the arrangement of exhaust gas in the vessel and engine coolant in the vessel to proceed with both power generation, fresh water, cooling, etc., using the coolant of the main engine to make waste heat generation, so that it can be used as a heat source for the de-use of cooling, with adsorption fresh water using high temperature vessel coolant, It relates to the development of marine non-active heat generation, fresh water and cooling composite plants.</p>	KOREA INST OCEAN SCI TECH	KR1020200072 042	2020/6/15
13	Fluid heating apparatus for retrieving residual oil of sunken ship	<p>The present invention relates to a fluid heating device for recovery of residue of immersion vessel. Fluid heating apparatus The heat transfer pipe is connected to the heat transfer pipe and is rotatably coupled to the heat transfer tube to rotate the heat transfer tube along an inlet and an outlet.</p>	(주)에쓰에이오 프쇼어; 강환국	KR1020200059 988	2020/5/19

14	VESSEL-MOUNTED OCEAN THERMAL ENERGY CONVERSION SYSTEM	A marine power generation system, comprising : a floating movable platform; and a stationary manifold, wherein the floating movable platform includes one or more OTEC heat exchange units, one or more turbine generators, water inlet and exhaust systems, and mooring systems, wherein the fixed manifold is in communication with the cold water pipe. One or more cold water discharge connections in communication with the water inlet system of the floating platform through the intermediate cold water conduit. Each cold water discharge connection is separable from the intermediate cold water pipe.	더 아벨 파운데이션 인크	KR1020167022 776	2015/1/20
15	Volatile organic compounds treatment system and ship having the same	VOC : The system according to the present invention and a ship including the same according to the present invention supply VOC to a VOC demand loaded on the ship, which is generated in an oil storage tank provided on the ship. Freezing storage tank for storing cooling heat of liquefied gas of gas fuel storage tank provided on the ship Liquefied gas heat exchanger for heat exchanging heat medium stored in the liquefied gas and the ice storage tank VOC. The heat exchanger of VOC, wherein the heat medium is heat-exchanged with a heat medium stored in the ice storage tank. The VOC storage tank stores VOC LVOC which is liquefied through the first heat exchanger and the second heat exchanger. VOC Is cooled by using the cold heat of the stored liquefied gas.	한국조선해양 주식회사	KR1020210054 585	2021/4/27
16	System and Method of Seawater Desalination using Ocean Thermal Energy Conversion on FLNG	The present invention relates to a system and a method for producing plain water of an FLNG, which are to produce plain water using temperature difference of seawater supplied to an FLNG in the FLNG. According to the present invention, the method for producing plain water of an FLNG includes : a step of evaporating a liquid working fluid of the FLNG by exchanging heat of the surface layer water and the working fluid; a step of generating electric energy using the evaporated working fluid; a step of liquefying the working fluid generating the electric energy; a step of evaporating the surface layer water in which the working fluid is evaporated; and a step of producing the plain water by liquefying the evaporated surface layer water. The produced plain water is supplied to a plain water demanding place of the FLNG, and a least a part of the produced plain water is supplied to the plain water demanding placed on the ground.	DAEWOO SHIPBUILDING MARINE	KR1020150073 943	2015/5/27

17	AIR COOLER OF SHIP	Is an air cooler of a ship. Air cooler A thermoelectric module for generating electricity by using a temperature difference between air and cooling water can include a thermoelectric module provided on the outside and a junction box mounted on the main body to be electrically connected to the thermoelectric element.	SAMSUNG HEAVY IND CO LTD; SAMSUNG HEAVY IND	KR1020200031569	2020/3/13
18	PUMPING-UP POWER GENERATION APPARATUS, POWER GENERATION SYSTEM HAVING THE SAME, AND POWER GENERATION METHOD	The present invention relates to a power generation system for generating electricity by generating electricity using renewable energy, and generating electricity by using seawater which moves inside the seawater storage tank by an external falling difference between the inside and outside of the seawater storage tank. A plurality of wind power installations arranged on the sea water surface. A plurality of solar power generation devices arranged on the sea water surface. The plurality of wind power generation apparatuses and the plurality of solar power generating apparatuses may include a control device for controlling an inflow operation or a pumping operation of the plurality of solar power generating apparatuses.	KOREA ELECTRIC POWER CORP	KR1020200082312	2020/7/3

19	Boil-Off Gas Treatment System and Method for Ship	<p>Disclosed are a system and a method for processing boil-off gas of a ship. The system for processing boil-off gas of a ship comprises : a compressor for receiving and compressing boil-off gas generated from liquefied gas stored in a storage tank of a ship; a heat exchanger supplied with all or a part of the boil-off gas compressed by the compressor to cool the same with uncompressed boil-off gas to be supplied to the compressor by heat exchange; a decompression device for decompressing the boil-off gas cooled in the heat exchanger to additionally cool the same; a first gas-liquid separator for receiving the boil-off gas decompressed by the decompression device, and performing gas-liquid separation therefor; and a second gas-liquid separator for receiving the liquefied gas separated by the first gas-liquid separator, and performing gas-liquid separation therefor. The second gas-liquid separator has an internal pressure lower than that of the first gas-liquid separator, separates flash gas generated by supplying the liquefied gas separated by the first gas-liquid separator to the second gas-liquid separator, and supplies the same to the flow of the uncompressed boil-off gas introduced into the heat exchanger. Accordingly, cooling performance of the heat exchanger can be enhanced.</p>	대우조선해양 주식회사	KR1020190069 275	2019/6/12
20	Liquefied Gas Regasification System for Vessel	<p>The present invention relates to a liquefied gas regasification system of a liquefied gas regasification vessel for increasing energy efficiency by recovering cold heat while regasifying liquefied gas. A liquefied gas regasification system of a liquefied gas regasification vessel comprises a high pressure pump compressing liquefied gas to a pressure required by a gas consumer. Vaporizer for gasifying liquefied gas compressed by the high pressure pump A trim heater for heat exchange with a 2 heat transfer medium, wherein a regasification gas transferred from the vaporizer to a gas consumer is heat-exchanged with a heat transfer medium. The heat transfer medium 2 may include 2 heat transfer medium.</p>	DAEWOO SHIPBUILDING MARINE	KR1020200014 765	2020/2/7

21	Liquefied Gas Regasification System and Method for Vessel	<p>The present invention relates to a system and a method for regasifying liquefied gas of a ship, wherein electric power is produced by recovering low-temperature heat while regasifying liquefied gas, thereby improving the energy efficiency. A system for regasifying liquefied gas of a ship according to the present invention comprises : a gasifier for gasifying liquefied gas through heat exchange with a first heat transfer medium; a trim heater for heating regasified gas transferred from the gasifier to a gas consumer to a temperature required by the gas consumer through heat exchange with a second heat transfer medium; a first cycle for circulating the first heat transfer medium; and a second cycle for circulating the second heat transfer medium. The first cycle comprises a first heat exchanger for gasifying a first heat transfer medium to be supplied to the gasifier through heat exchange with a heat source, and an expansion generator for producing electric power by expanding the first heat transfer medium gasified by the first heat exchanger. The second cycle comprises a second heat exchanger for heating a second heat transfer medium to be supplied to the trim heater through heat exchange with the heat source.</p>	<p>DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD; DAEWOO SHIPBUILDING MARINE</p>	<p>KR1020210066 250</p>	<p>2021/5/24</p>
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22	Fuel Gas Recovery System and Method for Vessel	<p>The present invention relates to a system and a method for recovering a gas fuel of a ship capable of recovering a recovered compressed BOG gas from a liquefied gas storage tank without being supplied as a fuel of an engine. A coffer dam is installed between a plurality of liquefied gas storage tanks. A heater for heating a heat transfer medium to heat the cofferdam. Compressor comprising cylinder of oil lubrication type compressing BOG discharged from the liquefied gas storage tank to a pressure required by a high pressure engine. A pressure control valve for decompressing the remaining high pressure boil-off gas supplied from the compressor to the high-pressure engine and decompressing the remaining high-pressure boil-off gas at a pressure higher than or equal to the operating pressure of the liquefied gas storage tank. An injector comprising : a heat transfer medium heated by the heater to spray a heat transfer medium heated by the pressure regulating valve to a low temperature evaporator gas reduced by the pressure regulating valve to phase change the oil mixed with the low temperature evaporation gas. A gas recovery line connecting the injector and the liquefied gas storage tank to be recovered into the liquefied gas storage tank.</p>	DAEWOO SHIPBUILDING MARINE	KR1020200056473	2020/5/12
23	liquefaction system of boil-off gas and ship having the same	<p>The present invention relates to an evaporated gas reliquefaction system and a ship including the same. A re-liquefaction apparatus for liquefying boil-off gas generated in a liquefied gas storage tank with a phase-changing refrigerant. Refrigerant cooler for cooling compressed refrigerant Vaporizer for exchanging refrigerant and boil-off gas A refrigerant separator for liquefying a refrigerant introduced into the liquefier so that the liquefied and gaseous refrigerant merges into different flows in the liquefier. The lubricant circulation unit separates lubricating oil from the refrigerant compressor and the refrigerant cooler and circulates the lubricant oil to circulate the lubricant oil to the refrigerant compressor. The filter unit may be provided at at least two positions on the refrigerant flow and have different specifications depending on the lubricant oil.</p>	현대중공업 주식회사	KR1020190118901	2019/9/26

24	liquefaction system of boil-off gas and ship having the same	<p>The present invention relates to an evaporated gas reliquefaction system and a ship including the same. A re-liquefaction apparatus for liquefying boil-off gas generated in a liquefied gas storage tank with a phase-changing refrigerant. Refrigerant cooler for cooling compressed refrigerant Vaporizer for exchanging refrigerant and boil-off gas A decompressing valve, comprising : a decompressing valve for returning a refrigerant, which is heat-exchanged with an evaporator gas, to the liquefier after depressurization. The filter unit may include a filter regeneration unit configured to apply pulsation to the filter unit to remove the lubricant accumulated in the filter unit.</p>	현대중공업 주식회사	KR1020190114 931	2019/9/18
25	A Regasification System Of Gas and Vessel having same	<p>According to the present invention, provided is a gas regasification system, which comprises : a vaporizing unit having a vaporizer for vaporizing liquefied gas stored in a liquefied gas storage tank and a trim heater heating the liquefied gas vaporized from the vaporizer to supply the same to a demand source; and a heat source supply apparatus transferring heat medium exchanging heat with the liquefied gas to the vaporizing unit, wherein a compressor compressing the heat medium in gas phase to supply the same to the trim heater is included.</p>	한국조선해양 주식회사; 현대 중공업 주식회 사	KR1020160159 454	2016/11/28
26	TARGET IMPACT MEASURING APPARATUS, WARSHIP COMBAT SYSTEM HAVING THE SAME, AND TARGET IMPACT MEASURING	<p>The present invention relates to a light weight evaluation device capable of determining whether a projectile launched by a target is hit by a target. A controller capable of controlling an operation such that the photographing unit photographs a target according to the launch state of the projectile. An evaluation unit for analyzing a degree of change of a target in an image photographed by the photographing unit to determine whether the projectile is hit. And. It is possible to quickly and accurately determine the hit of the projectile.</p>	HANWHA SYSTEMS CO LTD	KR1020210023 414	2021/2/22

27	Fuel Gas Supply System and Method for Crude Oil Eco-carrier	<p>The present invention relates to a fuel supply system fuel supply method which can use a volatile organic compound generated in a crude oil storage tank of a crude oil carrier using liquefied natural gas as a fuel. VOC is a diagram illustrating a fuel supply system of a crude oil carrier according to the present invention. Volatile Organic Compounds. The fuel supply system of a crude oil carrier according to the present invention collects the gaseous state VOC discharged from the crude oil storage tank without phase change. Fuel storage tank for storing LNG (Liquefied Natural Gas) for use with fuel of engine Fuel pump for discharging LNG pressure stored in the fuel storage tank VOC Compressor, wherein VOC is compressed from the LNG collecting tank to the same pressure as the pressure at which the fuel pump pressurizes VOC. The mixer of LNG and VOC, wherein the compressed gas is compressed in VOC and the compressed gas state by the fuel pump. The mixed fuel supply line of claim 2, wherein the engine is a four-stroke diesel cycle engine, and the mixed fuel mixed by the mixer is transferred to the engine by connecting the mixer and the engine. VOC : The process of claim VOC, wherein VOC is supplied from VOC collecting tanks to the mixer by connecting the two collecting tanks and the mixer. The method further comprises.</p>	대우조선해양 주식회사	KR1020190090 998	2019/7/26
28	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.	더 아벨 파운데 이션 인크	KR1020177034 853	2011/1/21

29	Boil-off Gas Reliquefaction System and Method	<p>The present invention relates to a reliquefaction system and method for reliquefying boil-off gas using an evaporation gas itself as a refrigerant.</p> <p>The compressor compresses the boil-off gas discharged from the liquefied gas storage tank to a pressure required by a high pressure engine. 1 Is a cross-sectional view of a high-pressure boil-off gas compressed by the compressor 1, and the remaining high-pressure BOG not supplied to the high-pressure evaporator is secondarily cooled to a temperature below the freezing point of the oil. The oil filter according 1, wherein the oil phase changed from 1 nd heat exchanger is filtered out from the secondary cooled high pressure evaporator. 2 Nd heat exchanger for secondarily cooling high pressure evaporator gas filtered by oil filter 2 to the temperature required by the decompressing apparatus.</p> <p>The decompressing apparatus of 2, wherein the pressure and the temperature are lowered by expanding the cooled high pressure boil off gas in the primary heat exchanger. .</p>	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD; DAEWOO SHIPBUILDING MARINE	KR1020190173 158	2019/12/23
30	Liquefied Gas Regasification System and Method for Vessel	<p>The present invention relates to a system and a method for regasifying liquefied gas of a ship, wherein electric power is produced by recovering low-temperature heat while regasifying liquefied gas, thereby improving the energy efficiency. A system for regasifying liquefied gas of a ship according to the present invention comprises : a gasifier for gasifying liquefied gas through heat exchange with a first heat transfer medium; a trim heater for heating regasified gas transferred from the gasifier to a gas consumer to a temperature required by the gas consumer through heat exchange with a second heat transfer medium; a first cycle for circulating the first heat transfer medium; and a second cycle for circulating the second heat transfer medium. The first cycle comprises a first heat exchanger for gasifying a first heat transfer medium to be supplied to the gasifier through heat exchange with a heat source, and an expansion generator for producing electric power by expanding the first heat transfer medium gasified by the first heat exchanger. The second cycle comprises a second heat exchanger for heating a second heat transfer medium to be supplied to the trim heater through heat exchange with the heat source.</p>	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD; DAEWOO SHIPBUILDING MARINE	KR1020200014 700	2020/2/7

31	Smart outer shell system	The present invention relates to a smart skin system and a method for manufacturing the same. The present invention relates to a thermoelectric module, and more particularly, to a thermoelectric module including a thermoelectric module, a thermoelectric module, a thermoelectric module, and a thermoelectric module.	KOREA INST CIVIL ENG BUILDING TECH	KR1020190169 379	2019/12/18
32	NAVIGATION LIGHT FOR VESSEL AND CONTROL BOARD FOR THE SAME	The present invention relates to an anti-fog lamp for a ship capable of exhibiting excellent exothermic performance in a super low temperature environment by using a planar heating film having uniform heat distribution and high transmittance and rapid thermal acceleration. The heating device includes a base substrate, an electrode unit laminated on the base substrate, an electrode unit laminated on the heating film, and a protective film laminated on the heating film.	IM ADVANCED MAT CO LTD	KR1020190162 951	2019/12/9
33	UNMANNED SUBMERCIBLE WITH EMERGENCY BATTERY CHARGING FUNCTION OF BATTERY MANAGEMENT SYSTEM	Is an unmanned submarine having an emergency battery charging function of a battery management system. The unmanned underwater vehicle according to claim battery, wherein a power source for driving the unmanned underwater vehicle is supplied. A battery management system (battery management system, BMS) for managing power of the battery and generating corresponding power management data. The emergency battery is configured to supply emergency power for driving the unmanned underwater vehicle. The present invention relates to an unmanned submarine having an emergency battery charging function of a battery management system. A battery charger Seebeck is provided to charge an emergency battery by generating an emergency power using a Seebeck effect and charge an emergency battery.	HANWHA SYSTEMS CO LTD	KR1020200083 497	2020/7/7
34	APPARATUS FOR COOLING CONTROL OF CONTAINER SHIP	A cooling control apparatus of a container ship is provided to control RPM of a pump by detecting the internal temperature of at least one engine among a plurality of engines. Revolution Per Minute. The control unit RPM may include a control unit.	현대중공업 주 식회사	KR1020190118 181	2019/9/25

35	Deep Water Based Hydrogen Production System	<p>More particularly, the present invention relates to a hydrogen production system for deep sea water based power generation capable of efficiently and mass-producing hydrogen using new renewable energy from sea water temperature difference power generation equipment, desalination apparatus, hydrogen production apparatus, and air compression apparatus in a deep sea platform body. In accordance with another aspect of the present invention, there is provided a deep sea water tank body which is disposed at a deep sea of a set water depth. The sea water temperature difference power generation device which is provided in the deep sea platform main body and performs power generation while receiving deep sea water and surface sea water. Desalination apparatus for producing sea water and fresh water by using deep sea water heat exchanged from the sea water temperature difference power generating apparatus through reverse osmosis filter. Hydrogen production apparatus for producing hydrogen through electrolysis of fresh water supplied from the desalination apparatus. A marine platform main body connected to the deep sea platform main body and the pipe, and receives and stores hydrogen generated from the hydrogen production apparatus. The present invention provides a hydrogen production system for deep sea water based power generation.</p>	최천기	KR1020190107 237	2019/8/30
36	Ship	<p>The container cargo LNG is loaded into a container-type LNG tank, and LNG bunker manifolds are used for the container. A hull, a hull, and a hull. An agent 1 fuel tank, which is fixedly installed in a hull and stores fuel used for propulsion or in-line maintenance of a hull. The hull is detachably installed on the deck of the hull. When the hull is in operation, the fuel stored in the fuel tank 2 is supplied to a fuel tank 2 1.</p>	SAMSUNG HEAVY IND	KR1020190141 459	2019/11/7

37	Boil-Off Gas Reliquefaction System and Method for a Vessel	A liquefaction system of boil-off gas and a method thereof are provided to re-liquefy boil-off gas generated by natural vaporization of liquefied gas. The present invention relates to a reliquefaction system for boil-off gas of a ship and a method for reliquefying boil-off gas of a ship. A lubricating oil phase-change means for phase-changing lubricating oil mixed with compressed supercritical evaporated gas in the multi-stage compressor. Oil filter for filtering lubricating oil mixed in a liquid state by the lubricant phase-change means. 1 Heat exchanger for cooling down the liquidus temperature of the boil-off gas by heat exchange with the pre-compression boil-off gas before the lubricant oil is compressed in the multi-stage compressor. .	대우조선해양 주식회사	KR1020190081 855	2019/7/8
38	Arrangement for operating a hatch cover of a cargo ship	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').	MACGREGOR FINLAND OY	KR1020217003 601	2019/7/2
39	Regasification System of liquefied Gas and Ship Having the Same	The present invention relates to a regasification system of liquefied gas and a ship having the same. The regasification system of liquefied gas includes : a vaporizer vaporizing the liquefied gas into a heat medium to supply the same to a demand source; and a heat medium heater heating the heat medium through a heat source, wherein the heat medium has a physical property which is phase-changed from a gas phase to a liquid phase by the liquefied gas in the vaporizer and is phase-changed from the liquid phase to the gas phase by the heat source in the heat medium heater, and the heat medium heater includes : a housing storing the liquid type heat medium and introducing the heat-exchanged heat medium with the liquefied gas; and a heat source supply unit allowing the heat source to flow in the liquid type heat medium stored in the	한국조선해양 주식회사; 현대 중공업 주식회 사	KR1020170118 954	2017/9/15

40	FUEL CELL SYSTEM AND SHIP HAVING THE SAME	<p>The present invention relates to a fuel cell system and a ship having the same. The fuel cell system comprises : a hydrogen generation unit including a raw material processing unit including an LNG evaporator for evaporating LNG by using steam (H₂O) in order to preprocess the LNG supplied from a raw material supply unit, a raw water processing unit for preprocessing raw water supplied from a raw water supply unit, a reformer for reforming preprocessed fuel supplied from the raw material processing unit and the steam (H₂O) supplied from the raw water processing unit, and a combustor for heating the reformer; a fuel cell including an anode in which fuel containing hydrogen is flowed from the hydrogen generation unit and which discharges exhaust gas, a cathode to which air is supplied as an oxidant required for a fuel cell reaction, and an electrolyte which serves as a transferring means for ion generated in the anode and the cathode so as to generate electricity; and a heat exchange unit for heat-exchanging the exhaust gas that is discharged from the combustor for combusting the exhaust gas of the fuel cell and water that has passed through the LNG evaporator (H₂O as a liquid or a gaseous state) for a phase change of the water (H₂O as a liquid or a gaseous state) that has passed through the LNG evaporator into the steam (H₂O). The steam (H₂O) discharged from the heat exchange unit is reheated to be supplied to the LNG evaporator and circulated.(120) Water tank(130) Air supply unit(210) Fuel cell(4101) LNG evaporator(4201) Steam separator(4202) Condenser(430) Reformer(440) Combustor(800) Gas engine(AA) Pump(BB) LNG tank(C1, C2) Discharge</p> <p>COPYRIGHT KIPO 2017</p>	HYUNDAI HEAVY INDUSTRIES CO LTD	KR1020150120951	2015/8/27
41	Regasification System of liquefied Gas and Ship Having the Same	<p>The present invention relates to a liquefied gas regasifying system and a ship including the same, comprising : a liquefied gas storage tank; a gasifier for gasifying liquefied gas of the liquefied gas storage tank into a heating medium; and a heat exchanger for heating the heating medium as a heat source, wherein the heat exchanger includes a primary heat exchanger and a secondary heat exchanger. The primary heat exchanger and the secondary heat exchanger are provided in a serial manner with respect to a flow of the heating medium and in a parallel manner with respect to a flow of the heat source.</p>	한국조선해양 주식회사; 현대중공업 주식회사	KR1020160095668	2016/7/27

42	DRAINAGE STRUCTURE FOR STORAGE TANK OF LNG SHIP	The present invention relates to a LNG tank and a method for manufacturing the same. A drain structure of a ship tank LNG is provided to rapidly discharge water generated by a temperature difference with an outside to the outside of a tank.	대우조선해양 주식회사	KR2020160006 769	2016/11/21
43	COOLING DOWN SYSTEM FOR LIQUEFIED GAS STORAGE TANK OF SHIP	A cooling down system of a liquefied gas storage tank is disclosed. A cooling down system of a liquefied gas storage tank according to an embodiment of the present invention is installed in a ship water side area in a liquefied gas storage tank of a ship. 1 1. A-2 pipe installed in a stern side area in a liquefied gas storage tank and provided with a plurality of nozzles 2. 1 Supply line according to 1, wherein the liquefied gas is supplied to a line-side region through an N 1 th nozzle. 2 Supply line according to 2, wherein the liquefied gas is supplied to a stern-side region through an N 2 th nozzle. Discharge line for discharge of boil-off gas in the bow-side region, installed in the bow-1 side region The discharge line of claim 2, wherein the first discharge line is disposed in a stern-side region. .	SAMSUNG HEAVY IND	KR1020190108 419	2019/9/2
44	Boil-Off Gas Reliquefaction System and	A liquefaction system of boil-off gas and a method thereof are provided to re-liquefy boil-off gas generated by natural vaporization of liquefied gas.	DAEWOO SHIPBUILDING MARINE	KR1020190104 328	2019/8/26
45	A Regasification System Of Gas and Vessel having the same	The present invention relates to a gas regeneration system and a vessel having the same. The gas regeneration system according to the present invention comprises : a single vaporizer for regenerating liquefied gas stored in a liquefied gas storage tank through a heat source and supplying the same to a customer; and a plurality of heat source heat exchangers for supplying the heat source to a fruit. The plurality of heat source heat exchangers are connected in series to each other on a basis of a flow of heat and have the same heat source.	현대중공업 주 식회사	KR1020170095 703	2017/7/27

46	COLD WATER PIPE ASSEMBLY FOR OCEAN THERMAL ENERGY CONVERSION	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.	록히드 마틴 코 포레이션	KR1020177019 952	2015/12/18
47	THERMOELECTRIC GENERATOR USING WASTE HEAT FROM ENGINE OF SHIP	The present invention relates to a thermoelectric generator using waste heat from an engine of a ship, which comprises : an engine installed in a ship; an exhaust gas line to discharge exhaust gas from the engine; and a first power generation unit wherein one side is connected to the exhaust gas line, and the other side is connected to the outside of the engine. The first power generation unit generates power by using a potential difference generated in accordance with a temperature difference between exhaust gas passing through a supercharger installed in the engine to be discharged to the outside and outside air having a lower temperature than the exhaust gas.	현대중공업 주식회사	KR1020140149 140	2014/10/30

48	UNMANNED SUBMERCIBLE CAPABLE OF JUDGING THE POSSIBILITY OF MISSION PERFORMANCE AGAINST THE REMAINING BATTERY USING BATTERY MANAGEMENT SYSTEM	<p>Disclosed is an unmanned submersible capable of determining a mission performance possibility against the remaining battery by using a battery management system (BMS). The unmanned submersible comprises : a battery supplying power for driving the unmanned submersible; a battery management system (BMS) managing the power of the battery and generating corresponding power management data; and a mission performance control module controlling the mission performance of the unmanned submersible in accordance with previously stored mission data and the power management data generated by the power management system, and generating mission performance situation data in real time.</p> <p>The unmanned submersible capable of determining a mission performance possibility against the remaining battery by using a battery management system is configured to monitor a battery failure and the remaining battery in real time, and determine and analyze a mission performance possibility based on a battery state, thereby effectively performing missions and preventing loss of the unmanned submersible.</p>	HANWHA SYSTEMS CO LTD	KR1020200083 463	2020/7/7
49	SYSTEM FOR TREATING BOIL-OFF GAS FOR A SHIP AND OCEAN CONSTRUCTION COMPRISING THE SAME	<p>The present invention provides a system for treating boil off gas of a ship. The system for treating boil off gas of a ship includes : a tank in which liquefied gas is stored; a compressor compressing the boil off gas generated from the tank; a cooler exchanging heat with the boil off gas compressed in the compressor; a vaporizer supplied with the liquefied gas from the tank to vaporize the liquefied gas; and a first thermoelectric element power generation part generating power through a temperature difference between the boil off gas and a heat medium in the cooler.</p> <p>Therefore, the system for treating boil off gas of a ship can maximize economic effects through energy reduction.</p>	SAMSUNG HEAVY IND	KR1020190077 203	2019/6/27
50	HEAT EXCHANGE SYSTEM AND OFFSHORE STRUCTURE HAVING THE SAME	<p>A heat exchange system according to an aspect of the present invention stores fruits. Circulation line Waste ste ste ste ste ste heat recovery unit which is provided on the circulation line and exchanges heat with exhaust gas. The temperature sensor according 1, wherein the temperature sensor and 2 sensor are installed in the fruit storage part. The temperature difference detected by 1 and 2 sensors is equal to or greater than a reference value. The mixing device mixes the fruits contained in the fruit storage unit.</p>	한국조선해양 주식회사	KR1020190067 378	2019/6/7

51	LIQUEFIED GAS RE-GASIFICATION SYSTEM OF VESSEL	<p>Is a liquefied gas regasification system of a vessel used to regasify liquefied gas using a mixed refrigerant in a ship. The LNG regasification system of a ship according to an embodiment of the present invention vaporizes the liquefied gas to deliver the liquefied gas to a demand source. The heat medium circulation line is provided to transfer heat from a heat source to vaporize the liquefied gas. 2. A pump installed in the heat medium circulation line and circulating the mixed refrigerant in the heat medium circulation line. An evaporator installed in the heat medium circulation line and vaporizes the mixed refrigerant by heat exchange with the heat source. A vaporizer which is installed in the heat medium circulation line and vaporizes liquefied gas of the liquefied gas transfer line by heat exchange with the mixed refrigerant using heat energy and latent heat of the vaporized mixed refrigerant. . The refrigerant of the mixed refrigerant is refrigerant. The mixing refrigerant has a boiling point difference of at least 20 °C to increase the temperature of the mixed refrigerant in the phase change process vaporized by the heat source. The mixed refrigerant is set so that the difference between the dew point temperature and the boiling point temperature of the mixed refrigerant at 10~20 bara is at least 10 °C.</p>	삼성중공업(주)	KR1020190015 161	2019/2/8
52	A Regasification System and Vessel having the same	<p>The present invention relates to a regasification system capable of maximizing regasification efficiency. According to the present invention, the regasification system comprises : a liquefied gas storage tank storing liquefied gas; a gasifier gasifying the liquefied gas; and an intermediate thermal medium supply apparatus exchanging heat with seawater to supply heat to the gasifier. The intermediate thermal medium supply apparatus comprises : a circulation pump circulating an intermediate thermal medium supplying heat to the gasifier; a suction drum supplying the intermediate thermal medium to the circulation pump; a thermal medium circulation line including the gasifier, the suction drum, and the circulation pump and circulating the intermediate thermal medium; and a pressure compensation line increasing the inner pressure of the suction drum in normal operation of the intermediate thermal medium apparatus and decreasing the inner pressure of the suction drum while the intermediate thermal medium apparatus is stopped.</p> <p>COPYRIGHT KIPO 2019</p>	KOREA SHIPBUILDING OFFSHORE ENGINEERING CO LTD	KR1020180050 083	2018/4/30

53	bed for disaster relief	The present invention relates to a disaster rescue bed. A disaster structure bed comprises a flat panel, a connecting rod, a support leg, and a support leg.	정상혁	KR1020190028 164	2019/3/12
54	OCEAN THERMAL ENERGY CONVERSION 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.	ABELL FOUNDATION INC	KR1020157012 925	2013/10/15
55	mobile marine waste treatment system over the sea and Drive method of the Same	The present invention discloses a resource utilization and regeneration technology. That is, a marine mobile waste treatment system and a method of driving thereof according to an embodiment of the present invention can block and extinguish the emission of dioxin, which is one of the environmental pollutants, by using a low-temperature plasma generated by pyrolysis of marine waste when operating a marine mobile facility loaded on a barge. Accordingly, electric energy, thermal energy, and chemical fuel obtained from the operation are used as a kinetic energy source to operate marine mobile facilities or to move barges carrying marine mobile facilities, thereby greatly contributing to resource recycling, conservation of ecosystems, and improvement of the natural environment.(100) Cleaning device(200) Shred and shredder(300) Dryer(400) Low temperature plasma gasifier(500) Rapid cooler(600) Syngas scrubber(700) Manual power generator(AA) Starting energy storage moduleCOPYRIGHT KIPO 2021	LEE GI WON; LEE SEUNG HAN	KR1020190144 102	2019/11/12

56	TEMPERATURE CONTROL HIGH PRESSURE TANK USED IN GAS TRANSPORTATION VESSEL AND TEMPERATURE CONTROL APPARATUS FOR	One embodiment of the present invention provides a high pressure tank for temperature control used in a gas carrier having a gas storage tank storing liquefied gas. The high pressure tank for temperature control includes : a type-C tank body which is used for controlling a temperature of the gas storage tank by supplying the liquefied gas to the gas storage tank before loading the gas on the gas storage tank, and is made of a material for storing the liquefied gas at a room temperature; and a self-support member coupled to the tank body and installed on the gas carrier to support the tank body.COPYRIGHT KIPO 2021	E CO LTD	KR1020190041413	2019/4/9
57	Device and Method for Designing Environment-Adaptive Flight Model for Underwater Glider, Recording Medium for Performing the Method	The present invention relates to an apparatus for designing an environmental adaption type flight model of an underwater glider, which can obtain a flight model having high accuracy in accordance with a physical feature of an underwater glider and an environmental feature of the ocean, to a method thereof, and to a recording medium for performing the method. The method for designing an environmental adaption type flight model of an underwater glider comprises the steps of : setting a basic parameter of a flight model; calculating a vertical speed of the underwater glider; setting initial conditions of flight parameters; calculating an entry angle of the underwater glider through numerical computation; calculating a vertical speed from the flight model; and determining the flight parameter as a final flight parameter of the flight model.	경북대학교 산학협력단	KR1020180016650	2018/2/12
58	Combined system of power generation, desalination and cooling system using ship waste heat	The present invention relates to a combined power generating, desalinating and cooling system using waste heat of a ship and, more specifically, to a combined power generating, desalinating and cooling system using the waste heat of the ship, which can implement all the power generation, desalination and cooling by using the waste heat of the ship. The combined power generating, desalinating and cooling system using the waste heat of the ship can generate power using the waste heat by using cooling water of a main engine, perform adsorption type desalination by using the cooling water of the ship having high temperature, and use the cooling water as a heat source for cooling detachment.COPYRIGHT KIPO 2021	KOREA INSTITUTE OF OCEAN SCIENCE TECHNOLOGY	KR1020190089988	2019/7/25

59	Fuel Gas Supply System and Method for Crude Oil Eco-carrier	<p>The present invention relates to a system and a method for supplying fuel, which can use, as fuel for an engine, volatile organic compounds generated from a crude oil storage tank of a crude oil carrier using liquefied natural gas (LNG) as fuel. The system for supplying fuel for a crude oil carrier, according to the present invention, comprises : a volatile organic compounds (VOCs) collection tank which collects gaseous VOCs that are discharged from the crude oil storage tank without a phase change; a fuel storage tank which stores the LNG to be used as the fuel for the engine; a fuel pump for pressurizing and discharging the LNG stored in the fuel storage tank; and a mixer for mixing the liquid LNG pressurized by the fuel pump and the gaseous VOCs discharged from the VOCs collection tank. The engine is a two-stroke diesel engine. The system further includes : a mixed fuel supply line for connecting the mixer and the engine, and supplying the mixed fuel mixed in the mixer to the engine; and a VOCs supply line for transferring the VOCs containing nitrogen and heavy hydrocarbon components from the VOCs collection tank to the mixer, by connecting the VOCs collection tank and the mixer.</p> <p>Therefore, the system can simplify the process of recovering and recycling VOCs. COPYRIGHT KIPO 2021</p>	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020190090997	2019/7/26
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60	Fuel Gas Supply System and Method for Crude Oil Eco-carrier	<p>The present invention relates to a system and a method for supplying fuel, which can use, as fuel for an engine, volatile organic compounds generated from a crude oil storage tank of a crude oil carrier using liquefied natural gas as fuel. The system for supplying fuel for a crude oil carrier, according to the present invention, comprises : a volatile organic compounds (VOCs) collection tank which collects gaseous VOCs, discharged from the crude oil storage tank, without a phase change; a fuel storage tank which stores the liquefied natural gas (LNG) to be used as the fuel for the engine; a high-pressure pump for compressing the LNG stored in the fuel storage tank to a high pressure required by the engine; a vaporizer for vaporizing the LNG compressed by the high-pressure pump into natural gas; and a mixer for mixing the high-pressure natural gas vaporized by the vaporizer and the gaseous VOCs discharged from the VOCs collection tank. The engine is a two-stroke diesel engine, and a VOCs supply line which connects the VOCs collection tank and the mixer to transfer the VOCs containing nitrogen and heavy hydrocarbon components from the VOCs collection tank to the mixer is further included. Therefore, the system can simplify a process of recovering and recycling the VOCs. COPYRIGHT KIPO 2021</p>	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020190090996	2019/7/26
61	Mobile ballast water treatment apparatus using plasma underwater discharge and water treatment system comprising the same	<p>The present invention relates to a mobile ship ballast water treatment apparatus using underwater plasma discharge, which comprises : a plasma treatment device having a plasma module and a fuel cell module supplying power to the plasma module and sterilizing water to be treated; and a marine moving means. The mobile ship ballast water treatment apparatus using underwater plasma discharge consigns and treats ballast water used in the other ship, thereby reducing a cost for remodeling the existing ship and a cost for installing the ship ballast water treatment apparatus of the new ship, supplying the power by a fuel cell to be eco-friendly, and recycling oxygen and ozone contained in the plasma-treated treatment water as supply gas of the fuel cell to improve power generating efficiency of the fuel cell. COPYRIGHT KIPO 2021</p>	DOOSAN HEAVY INDUSTRIES CONSTRUCTION CO LTD	KR1020190049187	2019/4/26

62	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.	ABELL FOUNDATION INC	KR1020157015097	2013/11/7
63	Fuel Oil Change Over Method and System for Vessel	The present invention relates to a liquid crystal display device. A method and a system for converting fuel oil for a ship are provided to stably switch a fuel oil even when a fuel oil inflow speed is different due to a level difference of a fuel oil storage tank. [] When the temperature difference between the 1 current temperature measurement value and 2 the reference temperature measurement value is, the fuel oil 2 is supplied to the engine through 2 a predetermined time, and the 1 flow rate of 1 the fuel oil supplied to the engine is controlled 2 at a rate of 1, and the fuel oil is converted into the fuel oil through a predetermined period of time, thereby controlling the 1 flow rate of the 1 fuel oil supplied from the fuel oil to the engine at a rate of approximately one 2-th-fuel-2 oil 1 1) 2 2 2 1.	대우조선해양 주식회사	KR1020180130454	2018/10/30
64	Receiver for refrigerant storage using membrane and cooling system	The present invention relates to a refrigerant-stored receiver using a built-in membrane and a cooling system, and more specifically, to a refrigerant-stored receiver using a built-in membrane and a cooling system, wherein a U-shaped membrane and the cooling system are installed in the receiver, which is a refrigerant storage tank, a refrigerant inlet, a refrigerant outlet and a valve are installed at the top, and a compressed air inlet, a compressed air outlet and a valve are installed at the bottom to inject the refrigerant into a seawater temperature difference power generation system when high pressure above refrigerant vapor pressure is supplied to the bottom of the membrane, and the cooling system is installed to drop the temperature of the tank below a condensing temperature when transporting the refrigerant.	한국해양과학기술원	KR1020180150318	2018/11/29

65	Boil-off gas cooling system and ship having the same	<p>The present invention relates to a boil off gas cooling system and a ship.</p> <p>The boil off gas cooling system includes : a cooling device heat-exchanging boil off gas generated in a liquefied gas storage tank with a first refrigerant; a compressor compressing the boil off gas heat-exchanged in the cooling device; a liquefier heat-exchanging the boil off gas compressed in the compressor and the first refrigerant with a second refrigerant; and a refrigerant heat exchanger cooling the first refrigerant or the second refrigerant by using liquefied gas supplied to a demand source from the liquefied gas storage tank.COPYRIGHT KIPO 2020</p>	KOREA SHIPBUILDING OFFSHORE ENGINEERING CO LTD; HYUNDAI HEAVY INDUSTRIES CO LTD	KR1020180124059	2018/10/17
66	Regasification System of Gas and Ship having the Same	<p>According to one embodiment of the present invention, a gas regasification system includes : a regasification supply line regasifying liquefied gas and supplying the same to a demand source; a heat exchanger provided on the regasification supply line; a first seawater heat exchanger and a second seawater heat exchanger supplying a heat medium to the heat exchanger; and a heat source circulating line having the first seawater heat exchanger and the second seawater heat exchanger, wherein the heat source circulating line branches from a downstream portion of the first seawater heat exchanger to be connected to the second seawater heat exchanger and the heat exchanger.</p>	한국조선해양 주식회사; 현대중공업 주식회사	KR1020180096946	2018/8/20

67	<p>REMOTE SWITCHGEAR SYSTEM OF INTEGRATED MAST FOR NEXT GENERATION NAVAL VESSELS</p>	<p>Disclosed is a remote opening/closing system of an integrated mast for a next-generation warship, which comprises : a door opening/closing device to perform a door opening/closing operation for an infrared sensing operation of an IRST arranged in the integrated mast; and a remote door opening/closing control module to remotely control door opening/closing of the door opening/closing device. The door opening/closing device includes : a door arranged in an IRST housing area of the integrated mast; an actuator to drive opening/closing of the door; a door sensor to sense opening/closing of the door; and a heater to apply heat to prevent ice formation of a rail to guide an opening/closing operation of the door. The remote opening/closing system of an integrated mast for a next-generation warship is configured to reduce and maintain the temperature difference between the internal temperature and the external temperature of the IRST housing area so as to prevent condensation in the integrated mast with relatively severe heat radiation in advance and firstly prevent ice formation when the door is opened. Moreover, heat is secondly applied to the rail of the door opening/closing device by the heater while the door is opened to prevent ice formation and increase operational resistance of the door opening/closing device.</p>	<p>HANWHA SYSTEMS CO LTD</p>	<p>KR1020200047 349</p>	<p>2020/4/20</p>
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68	Ocean temperature difference generation system using heat pump	<p>The present invention relates to an ocean thermal energy conversion system using a heat pump, which raises the temperature of surface seawater to use the surface seawater in an evaporator side of an ocean thermal energy conversion apparatus and to use deep seawater in a condenser side even under an environment that the temperature different between the surface seawater and the deep seawater is not great, thereby making a high temperature difference ocean power generation environment; is made to be operated in a state that seawater circulation power is minimized and a coefficient of performance (COP) of the heat pump is improved, thereby achieving economical power generation efficiency; and supplies a continuous and stable heat source even at any position or under any environment near the sea or on the sea. According to the present invention, the ocean thermal energy conversion system using a heat pump comprises : a surface seawater heat supplying unit recovering the heat of the surface seawater; a deep seawater heat supplying unit recovering the heat of the deep seawater; a turbine unit having a coolant circulation unit for circulating a coolant in order to exchange the heat of the surface seawater supplied by the surface seawater heat supplying unit with the heat of the deep seawater supplied by the deep seawater heat supplying unit, and a turbine for generating rotational energy with the coolant circulated by the coolant circulation unit; and a power generation unit generating electrical energy with the rotational energy of the turbine unit, wherein the surface seawater heat supplying unit and the deep seawater heat supplying unit are installed to be submerged in water, and submerged heat exchangers recover the heat of the surface seawater and the deep seawater through circulation of a circulating thermal medium, and then supply the heat to an evaporator of a turbo heat pump and a turbo condenser of the power generation</p>	G G TECHNOLOGY CO LTD	KR1020180147 067	2018/11/26
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69	<p>Quenching causal decision device by liquefied gas storage tank, liquefied gas carrier, and quenching causal decision method by liquefied gas</p>	<p>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).</p>	<p>미츠비시 조우 센 가부시키가 이샤</p>	<p>KR1020187032 804</p>	<p>2017/4/28</p>
70	<p>Regasification System of Gas and Ship having the Same</p>	<p>According to an embodiment of the present invention, a gas regasification system includes : a regasification supply line re-gasifying liquefied gas to supply the gas to a consumer; first and second heat exchangers placed on the regasification supply line; a heat source circulation line supplying a thermal medium for the regasification of the liquefied gas to the first and second heat exchangers; a first seawater heat exchanger exchanging heat between the thermal medium and seawater to supply the thermal medium to the second heat exchanger; a second seawater heat exchanger exchanging heat between the thermal medium discharged from the second heat exchanger and seawater to supply the thermal medium to the first heat exchanger; and a control valve placed between the first and second seawater heat exchangers on the heat source circulation line, and converting the thermal medium from a liquefied state to at least a partially gasified state. Therefore, the present invention is capable of reducing costs and the size of a facility by reducing the diameter of pipes in a thermal medium circulation line.</p>	<p>한국조선해양 주식회사; 현대 중공업 주식회 사</p>	<p>KR1020180096 944</p>	<p>2018/8/20</p>

71	Fuel Supply System	<p>Disclosed is a fuel supply system. The fuel supply system includes : a second compressor compressing boil off gas discharged from a storage tank to supply the same as fuel of an engine and using a fueling lubrication method; a control valve decompressing a part of the boil off gas compressed by the second compressor to resend the same to the storage tank; and a third filter filtering lubricating oil contained in the boil off gas decompressed by the control valve, wherein the lubricating oil contained in the boil off gas is decompressed by the control valve to be phase-changed. Therefore, the fuel supply system can prevent the lubricating oil from being introduced into the storage tank even when the compressor in the fueling lubrication method is used.COPYRIGHT KIPO</p> <p>2020</p>	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020180147 137	2018/11/26
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72	HIGH RESOLUTION SONAR MOUNTING TYPE UNMANNED INVESTIGATION SYSTEM FOR SEARCHING OF VICTIMS AND DISASTER ACTION OF UNDERWATER STRUCTURE	<p>The present invention relates to a high-resolution sonar-mounted unmanned inspection system for floating structure disaster response and survivor search in case of damage from storm and flood. To this end, the present system is characterized by comprising : an unmanned floating vessel which is an unmanned moving body of a small boat type which can move on the water, and is provided to perform wireless communication with a ground control device in order to transmit underwater search and measurement data from a side scan sonar to the ground control device; a sonar mounting jig which is arranged underwater while being fixedly connected to the unmanned floating vessel by using a wire as a medium, and has the side scan sonar mounted therein to adjust the direction in accordance with the protection and underwater environment; the side scan sonar which is provided to transmit the underwater search and measurement data towards the unmanned floating vessel by being connected to and assembled with a data cable in a state of being mounted on the sonar mounting jig, and can utilize a high-resolution dual frequency in a high-frequency band to recognize whether damage has been caused through searching and measuring a floating structure, to check whether the underwater topography has been changed, and to perform emergency search with respect to survivors in case of disaster, while performing an unmanned precise survey; and the ground control device which performs autonomous navigation control by transmitting sailing information to the unmanned floating vessel, and monitors after receiving the actual underwater search and measurement result through the side scan sonar from the unmanned floating vessel in real time, while being installed on the ground to function as a ground control center.</p> <p>Therefore, efficiency in inspection can be increased.(100) Unmanned floating vessel(120, 410) APC antenna(140, 440) Telemetry(400) Ground</p>	WOORI	KR1020190163 342	2019/12/10
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73	Electric propulsion system and ship having the same	<p>The present invention relates to an electric propulsion system and a ship including the same. According to the present invention, the electric propulsion system equipped with a power generation engine and a fuel cell for consuming a gas fuel of a liquefied gas storage tank mounted on a ship to produce electricity for propulsion of the ship comprises : an economizer which heats fresh water using exhaust gas discharged from the fuel cell; and a boiler which converts the fresh water heated in the economizer into steam using exhaust gas discharged from the power generation engine. The economizer and the boiler are provided in series based on the flow of the fresh water. COPYRIGHT KIPO 2020</p>	KOREA SHIPBUILDING OFFSHORE ENGINEERING CO LTD; KOREA INSTITUTE OF MACHINERY MATERIALS	KR1020180172067	2018/12/28
74	DUAL MODE LIQUEFIED GAS RE-GASIFICATION SYSTEM	<p>Disclosed is a dual mode liquefied gas re-gasification system, which can re-gasify liquefied gas by selecting a mixture refrigerant re-gasification mode or a singular refrigerant re-gasification mode. To this end, the dual mode liquefied gas re-gasification system according to an embodiment of the present invention comprises : a liquefied gas transport line which gasifies liquefied gas to discharge the same to a consumer; a heat medium circulation line in which a heat medium is circulated to gasify the liquefied gas; a pump which is installed at the heat medium circulation line and circulates the heat medium in the heat medium circulation line; an evaporator which is installed at the heat medium circulation line and gasifies the heat medium; a first heat exchanger which is installed at the heat medium circulation line and gasifies the liquefied gas by allowing the heat medium gasified by the evaporator and the liquefied gas to exchange heat; a heat medium branch line which is branched from one side of the heat medium circulation line, and in which part of the heat medium is selectively circulated; a heater which heats the heat medium flowing in the heat medium branch line; a second heat exchanger which is installed at the heat medium branch line and allows the heat medium heated by the heater and fuel gas gasified by the first heat exchanger to exchange heat; a bypass line which bypasses the second heat exchanger to transport the fuel gas gasified by the first heat exchanger to the consumer; and a control unit which determines one re-gasification mode between the mixture refrigerant re-gasification mode and the singular refrigerant re-gasification mode depending on a predetermined re-gasification process operating condition. COPYRIGHT KIPO 2020</p>	SAMSUNG HEAVY IND CO LTD	KR1020190015165	2019/2/8

75	Boil-Off Gas Reliquefaction System and Method of Discharging Lubrication Oil in the Same, and Method of Supplying Fuel for Engine	<p>Disclosed is a boil-off gas (BOG) reliquefaction system capable of removing a condensed or solidified lubricant in a simple and economic method. According to the present invention, the BOG reliquefaction system comprises : a first compressor to compress a part of BOG; a second compressor installed in parallel to the first compressor to compress the remaining BOG not supplied to the first compressor; a first heat exchanger to cool the BOG compressed by the first compressor through heat exchange using the BOG before compression by the first or second compressor as a refrigerant; a second heat exchanger to cool a fluid cooled in the first heat exchanger after compression by the first compressor through additional heat exchange, which uses BOG circulated in a refrigerant cycle as a refrigerant, while passing through a flow path; and a first decompressor to decompress the fluid additionally cooled by the second heat exchanger. The refrigerant cycle comprises : a second decompressor to decompress the BOG cooled by passing through a second flow path of the second heat exchanger after compression by the second compressor; a second decompressor to decompress the BOG which is cooled by passing through the second flow path of the second heat exchanger after compression by the second compressor; a second bypass line to bypass the BOG passing through the second flow path of the second heat exchanger from the second decompressor; and a lubricant collection means installed on an upstream portion of the second decompressor and the second bypass line on a downstream portion of the second flow path of the second heat exchanger. The fluid used as the refrigerant in the second heat exchanger passes through a third flow path of the second heat exchanger, and BOG passes through the second decompressor during reliquefaction of the BOG and passes through the second bypass line when a condensed or solidified lubricant is discharged.</p>	대우조선해양 주식회사	KR1020170139 113	2017/10/25
76	CONSTRUCTION STRUCTURE OF FLOATING TYPE STRUCTURE ON WATER SURFACE	<p>Disclosed is a construction structure of a floating type water structure using an underwater buoyance body. A buoyance body providing buoyance with regard to the water structure is floated at a predetermined depth from a water surface to prevent exposure to environmental factors such as wind, rollers, waves, and the like so as to secure durability of the buoyance body and increase stability of the water structure. COPYRIGHT KIPO 2020</p>	KUMKANG ENG CORP	KR1020180128 590	2018/10/26

77	SHIP	LNG(: The present invention relates to a ship comprising a fuel cell system) for producing electricity in conjunction with a Rankine cycle, system, LNG(for producing electricity by using a refrigerant for vaporizing LNG), and a power conversion unit for converting the DC current (AC) (DC) (Rankine Cycle) output from the fuel cell system to an. AC current.	한국조선해양 주식회사	KR1020150186 656	2015/12/24
78	LNG Storage Tank And Cool-Down Method of LNG Storage Tank	The present invention provides an LNG storage tank and a cooldown method of an LNG storage tank. The LNG storage tank includes an insulation layer, a liquid nitrogen inlet, and a gaseous nitrogen outlet. Accordingly, the present invention is possible to reduce time and costs required for cooldown of the LNG storage tank.	(주)동성화인텍	KR1020180059 221	2018/5/24
79	Open Type Liquefied Gas Regasification System and Method	The present invention relates to an open type regasification system for liquefied gas and a method for the same and, more specifically, to an indirect heat exchange and opening type regasification system for liquefied gas and a method for the same, which re-gasify liquefied gas using heat energy of seawater and indirectly exchange heat of the seawater and the liquefied gas by a propane refrigerant. According to the present invention, the open type regasification system for liquefied gas includes : a first heat exchanger exchanging the heat of the liquefied gas and a thermal medium and gasifying the liquefied gas; and a second heat exchanger evaporating the thermal medium by exchanging the heat of the seawater and the thermal medium condensed by the heat exchange of the first heat exchanger. The first heat exchanger is installed in the upper part than the second heat exchanger. The thermal medium of a liquid state condensed by the heat exchange in the first heat exchanger is circulated to the second heat exchanger by gravity.	고등기술연구원 연구조합	KR1020170183 900	2017/12/29

80	Production of Mechanical/Electrical Energy from Heat Energy with and by the use of Buoyancy Factor on Evaporation or Sublimation and Condensation	<p>The present invention relates to production of mechanical/electrical energy from heat energy by using a buoyancy factor for evaporation or sublimation and condensation. There are various heat energy sources. In various energy sources, solar energy, waste energy from waste, waste energy from a transformer, waste energy from a chemical reaction, waste energy from plants and machineries, and enormous heat energy from geothermal heat or a sea and an ocean are main energy sources which are free of charge but not in use. Besides, the heat energy can be produced from a fuel such as a fossil fuel, a hydrogen gas, and wood. More heat energy is wasted and is not efficient in spite of being converted into mechanical energy or electric energy. However, the heat energy can be converted into the mechanical energy or the electric energy 100% or greater by using evaporation or sublimation and condensation processes caused by using a buoyancy factor and a temperature difference to improve energy production efficiency. In addition, the heat energy obtained by dehydration for reuse and hydrolysis of partial chemical matters such as the salt or a hydroxide or the heat stored as latent heat when the salt is melted can be used to store considerable energy for several months. According to the present invention, the heat can be used. The energy under water of the sea in a winter season can be easily used to product the considerable energy when the temperature on the surface of an earth is very low temperature (freezing temperature).COPYRIGHT KIPO 2020</p>	SUDARSHAN K C	KR1020190118 076	2019/9/25
81	Float made of a double pipe	<p>: The present invention relates to a buoy made of a double pipe capable of preventing condensation due to temperature difference, and preventing condensation (PE) due to (PP) a temperature difference by forming a- space part between an outer shell and 1 an inner, semi-sphere, and a 2 plurality of bulkheads formed on both sides of parts by heaters to prevent condensation. The double pipe structure comprises parts of, a plurality of ribs formed in a radially spaced, shape and joined to each other by a two-way heater to form a, three-dimensional space part on the outer circumference . of the main body 1 and the outer semicircular body in the form of a 2 two-dimensional space part (×) in a length, direction.). sup, sup .5. sup .sub. and, sup n.sub.</p>	(주)해광테크	KR2020190001 093	2019/3/18

82	LIQUEFIED GAS REGASIFICATION SYSTEM	<p>Disclosed is a liquefied gas regasification system. According to an embodiment of the present invention, the liquefied gas regasification system includes : a condenser performing a condensation operation by using liquefied gas supplied from a storage tank; a high pressure pump pressurizing fluid condensed through the condenser to high pressure; a vaporizer vaporizing the pressurized fluid by using seawater; an ejector spouting the vaporized fluid to suck boil off gas of the liquefied gas stored in the storage tank and discharging the fluid mixed therewith; a thermoelectric module supplied with electricity from an electricity supply device to generate high temperature heat and cooling heat; a cooler cooling the discharged fluid by using the cooling heat; and a heater increasing temperature of the seawater to be supplied to the vaporizer by using the high temperature heat.COPYRIGHT KIPO 2020</p>	SAMSUNG HEAVY IND CO LTD	KR1020180112461	2018/9/19
83	Ventilating apparatus	<p>Provided is a ventilation apparatus. The ventilation apparatus includes : an air supply duct providing a moving path of air to be supplied to a ventilation space; a cooling device cooling the air by using cool air of boil off gas (BOG); and a path conversion device determining the moving path of the air introduced from the outside to allow the air to be directly transmitted to the air supply duct or to be transmitted to the air supply duct through the cooling device.COPYRIGHT KIPO 2020</p>	SAMSUNG HEAVY IND CO LTD	KR1020180105153	2018/9/4
84	Closed Type Liquefied Gas Regasification System and Method	<p>The present invention relates to a closed type regasification system for liquefied gas and a method for the same and, more specifically, to an indirect heat exchange and closed type regasification system for liquefied gas and a method for the same, which indirectly exchange heat of steam and liquefied gas by a propane refrigerant and regasify the liquefied gas using thermal energy of the steam. According to the present invention, the closed type regasification system for liquefied gas includes : a first heat exchanger exchanging the heat of the liquefied gas and a thermal medium and gasifying the liquefied gas; and a second heat exchanger exchanging the heat of the steam and the thermal medium condensed by the heat exchange of the first heat exchanger and evaporating the thermal medium. The first heat exchanger is installed in the upper part than the second heat exchanger. The thermal medium of a liquid state condensed by the heat exchange in the first heat exchanger is circulated to the second heat exchanger by the gravity.</p>	고등기술연구원 연구조합	KR1020170183901	2017/12/29

85	FUEL GAS SUPPLY SYSTEM	<p>A fuel gas supply system is disclosed. According to an embodiment of the present invention, a fuel gas supply system comprises : a compression unit compressing boil-off gas from liquefied gas supplied from a storage tank, and supplying the same to a first consumer through a boil-off gas supply line; a first heat exchange unit receiving a portion of the compressed boil-off gas through a reliquefaction line, and exchanging heat between the portion and the boil-off gas supplied from the storage tank; a second heat exchange unit receiving fresh gas through a fresh gas supply line from a first gas-liquid separator by which the compressed boil-off gas decompressed by a first pressure reducing valve after passing through the first heat exchange unit is gas-liquid separated, exchanging heat between the fresh gas and the compressed boil-off gas supplied through a branch line branching from a front end of the first heat exchange unit on the reliquefaction line, and supplying the fresh gas to a second consumer; a compressed gas supply valve provided on a compressed gas supply line which branches from a set section of the compression unit and supplies, to the second consumer, the boil-off gas compressed at a set pressure, and adjusting the amount of the compressed boil-off gas supplied to the second consumer; and a fresh gas supply valve provided at a front end of the second heat exchange unit on the fresh gas supply line to adjust the amount of fresh gas supplied to the second consumer through the second heat exchange unit. Therefore, the fuel gas supply system can stably supply fuel according to fuel consumption required by a customer.</p>	삼성중공업 주식회사	KR1020180073 573	2018/6/26
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86	OFFLOADING APPARATUS FOR PILE MOORING-TYPE FLOATING OFFSHORE STRUCTURE	Disclosed is a liquid cargo unloading apparatus for a pile fixing type floating marine structure. According to one aspect of the present invention, the liquid cargo unloading apparatus for a pile fixing type floating marine structure includes : a dolphin unloading facility which is fixed onto the sea so that a pile fixing type floating marine structure can be berthed and in which a regasification facility is mounted on an upper portion; a flexible hose installed between the pile fixing type floating marine structure and the regasification facility and transferring liquid cargo stored in a cargo storage tank of the pile fixing type floating marine structure to the regasification facility; and a pipeline transferring the cargo phase-changed from a liquid phase to a gas phase onto the land via the regasification facility.COPYRIGHT KIPO 2020	SAMSUNG HEAVY IND CO LTD	KR1020180075 877	2018/6/29
87	liquefied gas tank, fuel gas supply system, and ship having the same	The present invention relates to a liquefied gas storage tank, a gas fuel supply system, and a ship which can guarantee transport stability of liquefied gas. The gas fuel supply system is arranged on a ship other than a liquefied gas carrier, which loads liquefied gas therein as fuel for propulsion. The gas fuel supply system comprises : a pressurizing liquefied gas storage tank storing liquefied gas at a high pressure therein and allowing evaporation gas created by evaporating the liquefied gas to coexist; a stratification suppressing unit allowing the liquefied gas or the evaporation gas stored in the liquefied gas storage tank to flow to drop the temperature of the liquefied gas at a liquid surface which is the boundary surface between the liquefied gas and the evaporation gas in a direction of becoming closer to the temperature of the liquefied gas at the bottom in the liquefied gas storage tank; and a gas fuel processing unit to supply the gas of the liquefied gas storage tank to a user entity. The gas fuel processing unit supplies the liquefied gas as main fuel of the user entity or does not supply the evaporation gas to the user entity while sailing as the stratification suppressing unit suppresses a stratification phenomenon to delay a pressure increase of the liquefied gas storage tank.(AA) No stratification suppressing unit(BB) Operate in accordance with a stratification suppressing unit pressure increase(CC) Continuously operate the stratification suppressing unitCOPYRIGHT KIPO 2020	KOREA SHIPBUILDING OFFSHORE ENGINEERING CO LTD; HYUNDAI HEAVY INDUSTRIES CO LTD	KR1020180127 774	2018/10/24

88	Safety plate assembly	According to an embodiment of the present invention, a safety plate structure can comprise : a safety plate installed in an upper portion of a grating that is a steel structure in the form of a lattice to block a foreign substance falling to a lower portion of the grating, and preventing a pedestrian moving in the upper portion of the grating from slipping; and a fastening member for fastening the grating to the safety plate.COPYRIGHT KIPO 2020	FORWIS COMPANY LTD	KR1020190126 596	2019/10/14
89	Gas hydrate transport 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.	피솔러 여호수 아	KR1020177021 381	2015/12/28
90	cooling system for ship using cold energy of liquefied natural gas and control method for thereof	The present invention provides a ship cooling system using cold heat of liquefied natural gas, which cools a cooling object device having an electric device and a power converting device installed on a ship so that a size of a system is compact and energy efficiency is improved as liquefied natural gas is used as a refrigerant. The ship cooling system using cold heat of liquefied natural gas includes : a storage tank in which liquefied natural gas is stored; a gas supply pump supplying the liquefied natural gas stored in the storage tank; and a cooling part cooling the cooling object device by using cold heat of glycol water heat-exchanged with the liquefied natural gas to be cooled.COPYRIGHT KIPO 2020	KOREA MARITIME UNIVERSITY INDUSTRY ACADEMIC COOPERATION FOUNDATION	KR1020180112 629	2018/9/20

91	A Seawater Desalination Load Bank System and Its Control Method for Ocean Thermal Energy Conversion System Test and Surplus Power Utilization for Grid Stabilization	<p>The present invention relates to a seawater desalination load bank system for testing a power generation system using a seawater temperature difference and using surplus power, which connects surplus power of test and normal operations of seawater temperature power generation to a load bank system to use the power in a seawater desalination and concentration system, and a control method thereof. According to the present invention, the surplus power produced from the power generation system using a seawater temperature difference is used in a vacuum pump and an electric heater of the seawater desalination system, and even in the case of the seawater to be desalinated, surface and deep water completing heat exchange with a coolant is used, thereby minimizing operation cost and being applicable to various power generation equipment. According to the present invention, the load bank system comprises the power generation system using a seawater temperature difference and the seawater desalination system.(200) Seawater temperature difference power generation system(300) Road bank type seawater desalination system(AA) Surface water outlet(BB) Deep water inlet(CC) Surface water inlet(DD) Deep water outlet(EE) Surface water(FE) Deep water(GG) Drainage lineCOPYRIGHT KIPO 2019</p>	KOREA INSTITUTE OF OCEAN SCIENCE TECHNOLOGY	KR1020170161356	2017/11/29
92	METHOD AND SYSTEM FOR CONTROLLING A FLYING WING	<p>The invention relates to a method for control of a flying wing. The flying wing is arranged to be controlled to move along a predetermined trajectory by means of a fluid stream passing a wing of the flying wing. The flying wing comprises at least one control surface for controlling the movement of the flying wing along the predetermined trajectory. The flying wing is positioned in a reference frame where the x-axis is directed horizontally along a level L above which the flying wing moves, the y-axis is perpendicular to the x-axis in a vertical direction and the z-axis is perpendicular to the x-axis along the level L in a direction along the principal direction of the fluid stream. The invention further relates to a system comprising a flying wing and a computer-readable medium for use with a flying wing.</p>	미네스토 에이 비	KR1020157018821	2013/4/10

93	WATER RESISTANCE REDUCTION DEVICE OF LANDING VEHICLE	<p>An embodiment of the present invention relates to a water resistance reduction device of an amphibious armored vehicle. The amphibious armored vehicle having a main body and a driving body supporting the main body so as to be able to drive comprises the water resistance reduction device of the amphibious armored vehicle comprising : a first support member installed at a lower part of the main body; a second support member spaced apart and disposed from the first support member; a stretchable member disposed between the first support member and the second support member, and capable of stretching according to an injected air; and a link part connecting the first support member and the second support member, and supporting the second support member capable of being folded according to the stretching of the stretchable member.</p>	한화디펜스 주식회사	KR1020170159811	2017/11/28
94	Supercritical Carbon Dioxide Power Generation System and Ship having the same	<p>The present invention relates to a supercritical carbon dioxide power generation system, and a ship having the same. The supercritical carbon dioxide power generation system comprises : a supercritical carbon dioxide power generation cycle unit generating power to operate a power generator generating electricity using supercritical carbon dioxide; and a heat exchanging cycle unit absorbing heat from a heat source using a heat exchanging medium flowing at lower pressure than the supercritical carbon dioxide. The supercritical carbon dioxide power generation cycle unit comprises : the heat exchanging medium absorbing the heat from the heat source in the heat exchanging cycle unit; and a main heat exchanging unit enabling the supercritical carbon dioxide to exchange the heat.</p>	한국조선해양 주식회사	KR1020160065509	2016/5/27

95	THERMOELECTRIC GENERATION SYSTEM USED FOR SHIP	Disclosed is a thermoelectric generation system for a ship. According to one embodiment of the present invention, the thermoelectric generation system for a ship includes : a turbo charger using exhaust gas discharged from a ship engine to generate high temperature compressed air; and an air cooler cooling the compressed air supplied from the turbo charger, wherein the air cooler includes : a plurality of plate type heat exchange plates forming a first flow path therein, through which cooling water flows, performing heat exchange between the compressed air and the cooling water, and provided in parallel with each other; and a flow direction regulator provided on an upper portion of the heat exchange plate so that the compressed air flows between the heat exchange plates in a homogeneous manner.COPYRIGHT KIPO 2019	SAMSUNG HEAVY IND CO LTD	KR1020170171845	2017/12/14
96	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.	더 아벨 파운데이션 인크	KR1020147006931	2012/8/15
97	Boil-Off Gas Reliquefaction Method and System for LNG Vessel	Disclosed is an evaporation gas re-liquefying system of an LNG vessel. The evaporation gas re-liquefying system of an LNG vessel comprises : a compressor for compressing evaporation gas; a heat exchanger for cooling the evaporation gas compressed by the compressor by heat exchanging the evaporation gas with a refrigerant; and an expansion means for expanding fluid cooled by the heat exchanger, wherein the heat exchanger comprises : a core where heat exchange occurs between high temperature fluid and low temperature fluid; and a fluid spreading means for spreading the fluid introduced into the core or the fluid discharged from the core, wherein the core includes a plurality of diffusion blocks.	대우조선해양 주식회사	KR1020180007645	2018/1/22

98	Molten salt power generation device	<p>Provided is a molten salt power generation device capable of continuously generating electricity by absorbing and storing high temperature heat of waste heat generated from various heat sources as molten salt. The molten salt power generation device comprises : a storage container having an accommodation space therein; molten salt that is contained in a receiving space, maintains a solid state at room temperature, absorbs heat, melts, and stores heat; and a thermoelectric element that generates electricity by a temperature difference between a high temperature portion and a low temperature portion because the high temperature portion comes in contact with the storage container and the low temperature portion is exposed to the outside of the storage container.</p>	삼성중공업 주식회사	KR1020170163506	2017/11/30
99	SIMULATION APPARATUS AND METHOD PREDECTING PERFORMANCE DEGRADATION OF HEAT EXCHANGER IN SUBMARINE	<p>According to an embodiment, a simulation device for predicting degradation of a submarine heat exchanger performance can comprise : an input part for receiving a latitude and a submerged depth for each operation date of the submarine from a user; a seawater temperature calculation part for calculating a seawater temperature to which the submarine is exposed for each operation date through the latitude and the submerged depth for each operation date inputted to the input part; a fouling generation amount calculating part for calculating an amount of fouling generated in the heat exchanger of the submarine through the seawater temperature calculated by the seawater temperature calculation part; and a performance degradation calculating part for calculating an expected performance degradation rate of the heat exchanger for each operation date based on the fouling generation amount.(11) Input part(12) Seawater temperature calculating part(13) Profile storage part(14) Fouling generation amount part(15) Reference storage part(16) Performance degradation calculating part(AA) Latitude(BB) Submarine depth(CC) Delay time(DD) Latitude-seawater surface temperature profile(EE) Seawater depth-temperature difference profile(FF) Seawater temperature by mission date(GG) Fouling generation amount(HH) Metal thickness(II) Metal thermal conductivity coefficient(JJ) Fouling thermal conductivity coefficient(KK) Thermal resistance increase(LL) Performance degradation</p>	AGENCY FOR DEFENSE DEVELOPMENT	KR1020180063547	2018/6/1

100	<p style="text-align: center;">UNDERWATER ENERGY HARVESTING DRONE AND METHOD FOR OPERATION</p>	<p>An underwater energy harvesting drone has : a primary hull to be received to be submersible in ocean water; and a plurality of thermoelectric modules, wherein each module of the plurality of thermoelectric modules has a first operational interface in thermal contact with the primary hull. A thermal transfer element comes 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 for generating 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.(902) Sail a UEHD among positions of a hot water discharge holes(904) Open/deploy an inlet scoop and the discharge hole to receive or pump cold water to an inner storage tank(905) Open/deploy the inlet scoop and the discharge hole to receive or pump hot water to the inner storage tank(906) Close the inlet scoop and the discharge hole to store cold seawater in the inner storage tank(907) Close the inlet scoop and the discharge hole to store a how water flume in the inner storage tank(908) Sail the UEHD to a discharge hole flume and perform hovering or tracking with a main hull in a hot zone(909) Sail the UEHD to open water to arrange the main hull in cold water(910, 911) Fill an oriented ballast tank to a forego position(912, 913) Operate thermoelectric modules to charge electrical power storage device(914) Move the UEHD to open water(915) Move the UEHD to a hot water discharge hole flume(916) Operate the UEHD with respect to a mission profileCOPYRIGHT KIPO 2020</p>	<p style="text-align: center;">THE BOEING COMPANY</p>	<p style="text-align: center;">KR1020190003 362</p>	<p style="text-align: center;">2019/1/10</p>
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101	Water ingress detector installed in a hold	<p>The present invention relates to a flooding detection device for a vessel, which has semi-permanent life and increases accuracy. According to the present invention, the flooding detection device for a vessel comprises : first and second detection rods including first and second heaters heated when receiving power, first and second temperature sensors detecting the heating temperature of the first and second heaters to generate a signal proportional to the temperature, and first and second thermal conductive bodies discharging heat of the first and second heaters when coming in contact with flooding water; a protection case installed on the upper side of the first and second thermal conductive bodies; and a flooding detection sensor disposed in the case to supply operational power and output a flooding signal when the temperature difference between the first and second heaters reaches a predetermined range.COPYRIGHT KIPO 2019</p>	UNCTECH CO LTD	KR1020180014405	2018/2/6
102	OCEAN THERMAL ENERGY CONVERSION POWER PLANT COLD WATER PIPE CONNECTION	<p>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.</p>	ABELL FOUNDATION INC	KR1020147006953	2012/8/15

103	OPERATING METHOD OF LIQUEFIED GAS CARRIER	<p>Disclosed is an operating method of a liquefied gas carrier. According to one embodiment of the present invention, the operating method of a liquefied gas carrier includes : a step of loading liquefied natural gas onto a storage tank installed on the liquefied gas carrier from a producing district of natural gas; a step of sailing the liquefied gas carrier to a demand source of the natural gas from the producing district; a step of unloading the liquefied natural gas received in the storage tank in the demand source; a step of loading liquid nitrogen onto the storage tank from the demand source; a step of sailing the liquefied gas carrier to the producing district from the demand source; and a step of unloading the liquid nitrogen received in the storage tank in the producing district.(S1) Load LNC onto a storage tank in a producing district of natural gas(S2) Sail the liquefied gas carrier to a demand source of LNG(S2-1) Increase an internal pressure of the storage tank(S3) Unload the LNG accommodated in the storage tank at the demand source for the LNG(S4) Load LN2 onto the storage tank at the demand source for the LNG(S5) Sail the liquefied gas carrier to the producing district of the natural gas(S6) Unload the LN2 accommodated in the storage tank in the producing district of the natural gasCOPYRIGHT KIPO 2019</p>	SAMSUNG HEAVY IND CO LTD	KR1020170163078	2017/11/30
104	Treatment of nuclear waste exclusively for ocean won, nuclear reactor equipment of boiling water type double structure	<p>The present invention relates to a nuclear waste treatment boiling water dual structure reactor facility for a marine nuclear power generation, which is for continuous nuclear power operation. According to the present invention, a nuclear power is operated in a nuclear radioactive leakage control dual structure block tank dust collector (794) provided at a connection side of a nuclear power generating nuclear waste processing unit (811a) of a nuclear hydroelectric power generating facility unit (811).COPYRIGHT KIPO 2019</p>	LEE WOO SUNG	KR1020180010336	2018/1/29
105	INSULATION SYSTEM FOR NATURAL GAS CARGO OF CARRIER AND LIQUEFIED NATURAL GAS	<p>The present invention relates to a membrane type heat insulation system for a cryogenic liquefied gas carrier cargo tank and a liquefied gas fuel container, wherein a secondary heat insulation layer comprises a plurality of panels which are stacked in multiple layers while each pair of upper and lower panels is arranged to intersect each other, whereby heat loss which may occur in the gap between the panels can be minimized and deformation due to a temperature difference can be minimized.</p>	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020170180711	2017/12/27

106	FLOAT WITH GROUND MEMBER AND WATER STRUCTURE WITH THE SAME	<p>The present invention relates to a float with a ground member and a water structure with the same, which are possible to prevent corrosion of a structure, caused by a residual current, and prevent damage caused by falling of a thunderbolt without difficult installation operation of a ground wire connecting the conductive ground member, assigning a ground function about a water structure such as a water solar power apparatus or the like, to the ground by own configuration itself. The present invention includes : a main body having a vacant space in which the inside is sealed and forming buoyancy; and a conductive ground member which is installed on the main body and in which an upper end portion is connected with a portion above a water surface of the water structure and a lower end portion becomes a submerged state into water to connect the water surface from the water structure to be possible to perform the ground function.</p>	스코트라 주식회사; 한국수자원공사; 한화큐셀앤드첨단소재주식회사	KR1020170124 173	2017/9/26
107	VESSELE HAVING SOLAR POWER GENERATOR	<p>Disclosed is a ship having a solar power generator. According to one embodiment of the present invention, the ship having a solar power generator includes : an LNG storage tank storing liquefied natural gas; a thermal collector including a reflector formed on the LNG storage tank and a thermal collecting unit collecting solar heat reflected from the reflector; and an engine generating power for driving the ship.</p>	충북대학교 산학협력단	KR1020170164 319	2017/12/1
108	LIFE SAFETY JACKET	<p>The present invention provides a life jacket, having a heating means capable of preventing malfunction and automatically and manually operating. The life jacket includes : a pad having a first space and a second space, mutually stacked; and a heating cartridge provided on the pad, wherein the heating cartridge includes : a first chamber connected with the first space; a second chamber connected with the second space; a pump injecting gas into the first chamber; and a heating body received in the first chamber, wherein the heating body is heated by the gas injected from the pump. The gas is received in the first space. A liquid heat medium is received in the second space and the second chamber.COPYRIGHT KIPO 2019</p>	KIM GIL HOON	KR1020180021 141	2018/2/22

109	SYSTEM AND METHOD TO USE MAGNETIC PHASE TRANSITION FOR ENHANCEMENT	An electromagnet can be used to provide a controlled magnetic field, for example for the purpose of minesweeping. The electromagnet is constructed of a material which has a Curie temperature, such that the electromagnet can be stored at a temperature above the Curie temperature, but deployed below the Curie temperature in use.	탈레스 홀딩스 유케이 피엘씨	KR1020170060 580	2017/5/16
110	SMART RENEWABLE COMPLEX CULTIVATING PLANT USING RENEWABLE ENERGY	The present invention provides a smart new renewable composite culture plant compositely using new renewable energy and recycling by-products, which comprises : a facility unit composed of a facility structure floating on the surface of a sea to provide installation space and sites, a convergence culture device including a circulation filtering fish farm where marine lives are farmed and a plant culture field where plants are cultivated in the facility structure, and an energy generation unit supplying new renewable energy to the convergence culture apparatus, wherein the energy generation unit is installed at one or more selected from a group of a solar energy generation unit, a seawater heat energy generation unit, and a wind power generation unit; and a position fixation unit composed of a position-fixing device fixed on the sea floor or on the seashore and a connection member connecting the position-fixing device to the facility unit to fix the facility unit to a floating position, thereby giving less burden in using sites and allowing eco-friendly operation and energy saving in operating the convergence culture system.COPYRIGHT KIPO 2019	KOREA INSTITUTE OF OCEAN SCIENCE TECHNOLOGY	KR1020170135 340	2017/10/18
111	Gas storage and transporting device	An assembly for storing and transporting compressed fluid, such as compressed natural gas (CNG) that includes; a plurality of hexagonally stacked pipe stored in a cargo hold in or on a vessel, such as a ship or barge, that includes a lower support, side supports and a forcing mechanism that presses so strongly down on the pipes that they cannot move relative to themselves or relative to the vessel on which they are placed in any service situation. The friction between each of the pipes causes the plurality of pipes to act as part of the vessel in terms of its structure. Each of the pipes in the plurality of pipes is connected to a manifold system to allow or the loading and unloading of the compressed fluid.	GEV TECH PTY LTD	KR1020197007 216	2017/8/3

112	Ejector-combination type vapor compression cooling-thermal energy conversion dual system	The present invention relates to an ejector-combined vapor compression type cooling thermal difference generation dual system and, more specifically, to a dual system configured to enable a cooling system and a power generation system to be used in one device at the same time. In the cooling system, cooling performance can be increased by reducing loss generated during expansion with an ejector instead of a conventionally used expansion valve. Moreover, the power generation system can be operated without an additional condenser for driving a turbine. Therefore, cooling and power generation can be combined.	한국해양과학기술원	KR1020170112546	2017/9/4
113	Regasification System of liquefied Gas and Ship Having the Same	The present invention relates to a liquefied gas regasification system capable of increasing gasification efficiency of liquefied gas and a ship including the same. According to the present invention, the liquefied gas regasification system comprises a gasifier to gasify liquefied gas with a thermal medium to supply the same to a customer and a thermal medium supply unit to supply the thermal medium to the gasifier. The thermal medium supply unit comprises : a thermal medium pump to pressurize the thermal medium; a thermal medium heater heating the pressurized thermal medium by a heat source to supply the thermal medium to the gasifier; an expansion drum to store the thermal medium exchanging heat with the liquefied gas in the gasifier; a thermal medium circulation line sequentially connecting the thermal medium pump, the thermal medium heater, the gasifier, and the expansion drum to form a closed-loop shape; a thermal medium storage tank to store the thermal medium discharged from the expansion drum; and a thermal medium discharge line connected from the thermal medium storage tank to an upstream portion of the gasifier in the thermal medium circulation line.COPYRIGHT KIPO 2019	HYUNDAI HEAVY INDUSTRIES CO LTD	KR1020170118962	2017/9/15

114	Regasification System of liquefied Gas and Ship Having the Same	<p>The present invention relates to a liquefied gas regasification system and a ship having the same. The liquefied gas regasification system includes : a vaporizer vaporizing liquefied gas into a heat medium to supply the same to a demand source; and a heat medium supply unit supplying the heat medium to the vaporizer, wherein the heat medium supply unit includes : a heat medium pump pressurizing the heat medium; a heat medium heater heating the pressurized heat medium through a heat source to supply the same to the vaporizer; an expansion drum storing the heat-exchanged heat medium with the liquefied gas in the vaporizer; a heat medium circulating line sequentially connecting the heat medium pump, the heat medium heater, the vaporizer and the expansion drum and having a closed loop shape; and a heat medium collection line collecting the heat medium from an upstream portion and a downstream portion of the heat medium heater to control pressure of the expansion drum.</p> <p>COPYRIGHT KIPO 2019</p>	HYUNDAI HEAVY INDUSTRIES CO LTD	KR1020170118 961	2017/9/15
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115	Intelligent equipment installed in marine resource production system for remote monitoring	<p>The present invention relates to a design-measurement comparison algorithm-embedded intelligent apparatus installed in a marine resource production system for remote monitoring. More specifically, the intelligent apparatus is installed in a marine resource production system to monitor the marine resource production system and surrounding environments in an extreme marine environment, such as typhoon, hurricane, and the like. In other words, the intelligent apparatus compares and analyzes an actual measurement value and a normal design value to provide the result to a remote place, thereby reducing a time equal to or longer than one month required, in a conventional method, for a remote engineer who receives only the measurement value, and performs analysis and evaluation after normalization based on insufficient measurement values to check a fatigue failure of a part forming the marine resource production system in the extreme marine environment. According to the present invention, the intelligent apparatus comprises a casing box and a subframe.(AA) Interlocking with a web server(BB) Satellite and mobile antenna(CC) Pressure/humidity/temperature gauge(DD) Thermal camera, Digital camera(EE) Wind direction/speed gauge(FF) Glass fiber case (NEMA 4X, IP66, UL)(GG) 15-day non-charging battery (greater than 800 Ah)(HH) 6 degrees of freedom triaxial gyro(II) Server and storage design-measurement analysis and evaluation software(JJ) Batter charging controller(KK) Bolt-coupling subframeCOPYRIGHT KIPO 2019</p>	BAIKSAN SNK CO LTD	KR1020180146860	2018/11/25
116	LNG FUEL SUPPLY SYSTEM UTILIZING PHASE CHANGING FLUID	<p>The present invention relates to an LNG fuel supply system, and more specifically, to an LNG supply system using fluid causing a phase change, which uses fluid causing a phase change as a heat source of vaporization to vaporize LNG and supplies the same for propulsion of an LNG propulsion ship and fuel of an auxiliary engine. The present invention, which is the fuel supply system of LNG propulsion ships, vaporizing the LNG to supply the same for the fuel of the engine, is characterized by using the fluid causing a phase change as the heat source for vaporizing the LNG.COPYRIGHT KIPO 2019</p>	DONG A UNIVERSITY RESEARCH FOUNDATION FOR INDUSTRY ACADEMY COOPERATION	KR1020180010571	2018/1/29

117	Environmentally-Friendly Subscription and Its Manufacture using a Heat-Reduced Casing	<p>The present invention relates to an eco-friendly buoy using a heat-shrinkable casing, and to an apparatus and a method for manufacturing the same, and more particularly, to an eco-friendly buoy using a heat-shrinkable casing, and to an apparatus and a method for manufacturing the same, in which a hot-melt adhesive is supplied to both sides of the buoy to fix a side cap, and then a cylindrical heat-shrinkable casing is supplied so that the buoy and the heat-shrinkable casing are supplied to the inside of a heating furnace and rotated. With supplied heat, the cylindrical heat-shrinkable casing is coupled to the entire outer diameter surface, and thus the eco-friendly buoy is coated.COPYRIGHT KIPO 2019</p>	SEINSTEEL	KR1020180027 746	2018/3/9
118	Boil-Off Gas Reliquefaction System and Method of Discharging Lubrication Oil in the Same	<p>A boil-off gas reliquefaction system is disclosed. The boil-off gas reliquefaction system includes : a compressor compressing a boil-off gas; a heat exchanger cooling the boil-off gas compressed by the compressor by exchanging heat with the boil-off gas before being compressed as a refrigerant; a decompressing device installed in a back end of the heat exchanger and decompressing a fluid cooled by the heat exchanger; and a gas-liquid separator installed in a back end of the decompressing device and separating re-liquefied liquefied gas and the boil-off gas left in a gaseous state. The compressor includes at least one fueling type cylinder. The gas-liquid separator is connected to a lubrication oil discharging line discharging lubrication oil gathered inside the gas-liquid separator.(AA) NitrogenCOPYRIGHT KIPO 2019</p>	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020170097 315	2017/7/31
119	A Regasification System Of Gas and Vessel having same	<p>According to the present invention, provided is a gas regasification system, which comprises : an evaporation unit which can re-gasify liquefied gas stored in a liquefied gas storage tank to supply the liquefied gas to a demand; a supply apparatus supplying heat sources circulating while being accompanied by a phase change to the evaporation unit; and a power generating apparatus absorbing energy generated during the phase change of the heat sources to generate power.</p>	현대중공업 주식회사	KR1020160126 553	2016/9/30

120	Power generation efficiency improved for floating solar power generating system	<p>The present invention relates to a water photovoltaic power generation system for increasing power generation efficiency of a solar panel used to a photovoltaic power generation. The water photovoltaic power generation system is capable of preventing a phenomenon of a reduction of a power generation amount due to a temperature rise of a solar cell module by a smooth contact of an air to a back surface of a solar cell plate and having a support supporting stably the solar cell plate even in a wind pressure mounted thereon. The water photovoltaic power generation system with improved power generation efficiency comprises : a photovoltaic power generation panel; a plurality of main frames; an interval adjustment frame; a fixing frame; and a plurality of buoyant bodies.COPYRIGHT KIPO 2019</p>	W SOLAR CO LTD	KR1020170087979	2017/7/11
121	Power generation system	<p>According to the present invention, a power generation system is applied to a ship having a consumption device to consume evaporated gas to generate electricity, and comprises : a power generation unit generating power by driving a turbine with a circulating working fluid; and an evaporation unit evaporating liquefied gas through heat exchange by being supplied with a portion of the circulating working fluid to supply evaporated gas to the consumption device.COPYRIGHT KIPO 2019</p>	KOREA ELECTRIC POWER CORPORATION; HYUNDAI HEAVY INDUSTRIES CO	KR1020170087890	2017/7/11

122	Boil-Off Gas Reliquefaction System and Method of Discharging Lubrication Oil in the Same	<p>Disclosed is a method to discharge lubricant in a boil-off gas (BOG) reliquefaction system, capable of reducing or improving that condensed or solidified lubricant closes a flow path of a heat exchanger, wherein the BOG reliquefaction system compresses BOG by a compressor, performs heat exchange between the compressed BOG and BOG before being compressed in a heat exchanger to cool the compressed BOG, and decompresses the BOG cooled by the heat exchange by a decompression apparatus to reliquefy the BOG. The BOG used as a refrigerant in the heat exchanger is supplied to the heat exchanger through first and second supply lines, the BOG before being used in the heat exchanger as the refrigerant is bypassed and supplied to the heat exchanger along a bypass line, a bypass valve to control the flow rate and opening/closing of a fluid is installed on the bypass line, a first valve to control the flow rate and opening/closing of the fluid is installed on the front end of the heat exchanger in the first supply line, a second valve to control the flow rate and opening/closing of the fluid is installed on the rear end of the heat exchanger in the second supply line, and the compressor includes at least one lubrication type cylinder. According to the present invention, a lubricant discharge method of the BOG reliquefaction system comprises : a step 2) of opening the bypass valve, and closing the first and second valves; a step 3) of supplying the BOG before being used in the heat exchanger as the refrigerant through the bypass line to compress the BOG by the compressor; and a step 4) of supplying a part or all of the BOG compressed by the compressor to the heat exchanger. Accordingly, condensed or solidified lubricant is molten or the viscosity of the same is decreased by the BOG compressed and heated by the compressor, and thus the lubricant is discharged.(AA) Low pressure-engine(BB) High pressure-engine</p> <p>COPYRIGHT KIPO 2019</p>	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020170097 313	2017/7/31
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123	Boil-Off Gas Reliquefaction System and Method of Discharging Lubrication Oil in the Same	<p>Disclosed is an evaporation gas reliquefaction system capable of removing condensed or coagulated lubricating oil simply and economically. The evaporation gas reliquefaction system includes : a compressor for compressing evaporation gas; a heat exchanger for exchanging heat with the evaporation gas compressed by the compressor using evaporation gas before being compressed by the compressor as refrigerant to cool the compressed evaporator gas; and a decompression device mounted at a rear end of the heat exchanger to decompress a fluid cooled by the heat exchanger. The evaporation gas reliquefaction system further includes at least one among : a first temperature sensor mounted at a front end of a low temperature passage of the heat exchanger and a fourth temperature sensor mounted at a rear end of a high temperature passage of the heat exchanger; a second temperature sensor mounted at a rear end of the low temperature passage of the heat exchanger and a third temperature sensor mounted at a front end of the high temperature passage of the heat exchanger; and a first pressure sensor mounted at the front end of the high temperature passage of the heat exchanger and a second pressure sensor mounted at the rear end of the high temperature passage of the heat exchanger, and the compressor has at least one lubricated cylinder.(AA) Low pressure engine(BB) High pressure engineCOPYRIGHT KIPO 2019</p>	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020170097316	2017/7/31
124	FLOATING SOLAR POWER GENERATING SYSTEM	<p>The present invention discloses a water floating-type photovoltaic device. The disclosed water floating-type photovoltaic device includes a float floating on the water surface and a solar photovoltaic film coupled to the upper surface of the float for photovoltaic power generation. Therefore, the present invention can be installed by bonding a thin film type organic photovoltaic film to a tube-shaped float floating on water. So, the installation, disassembly, transportation and movement of facilities can be easily performed without using heavy equipment.COPYRIGHT KIPO 2019</p>	HONG SUNG MIN; MIN BYUNG RO	KR1020180030394	2018/3/15

125	Installing apparatus for rotary sock	<p>In the embodiment according to one of the device and back for a rotary equipment, marine structure formed out flow pipe is arranged on the rotary table of the installation hole, said number 1 number 1 and number 2 consisting of thickness less than thickness longitudinal direction thickness the thickness corresponding C plate is provided to sustain said number 2 rotary back tool for a rotary surfaces, wider than said rotary table, said C plate having an inside diameter greater than an outside diameter of said C plate be received in the receiving hole, said receiving hole in which a space is formed between said C plate installed to support including characterized. The rotary surfaces for a equipment in the device, the cover plate and prevent shaking C hereinafter for supporting rotary hollow to enclose to encapsulate, intercepts the C is filled clearance between the support plate, the side body [...] work while the drain, C plate exterior to be a fall.</p>	현대중공업 주식회사	KR2020150002 747	2015/4/28
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126	Boil-Off Gas Reliquefaction System and Method of Discharging Lubrication Oil in the Same	<p>Disclosed is a method to discharge lubricant in a system to reliquefy boil-off gas (BOG), which compresses the BOG by a compressor, cools the BOG through heat exchange with evaporation gas in a heat exchanger before compressing the compressed BOG, and decompresses a heat-exchanged and cooled fluid by a decompression apparatus to prevent or mitigate a phenomenon that condensed or solidified lubricant closes a flow path of the heat exchanger. According to the present invention, the compressor includes at least one lubrication type cylinder, and the lubricant discharge method determines a time point to discharge the condensed or solidified lubricant when one or more conditions are satisfied among a condition of maintaining a state, in which a temperature difference (hereinafter, referred to as a low temperature flow temperature difference) between a temperature of the BOG used as a refrigerant in the heat exchanger at the front end of the heat exchanger and the temperature of the BOG cooled by the heat exchanger after being compressed by the compressor is equal to or greater than a first set value, for a predetermined time or longer, a condition of maintaining a state, in which a temperature difference (hereinafter, referred to as a high temperature flow temperature difference) between the temperature of the BOG used as the refrigerant in the heat exchanger and the temperature of the BOG sent to the heat exchanger after being compressed by the compressor is equal to or greater than the first set value, for a predetermined time or longer, and a condition of maintaining a state, in which a pressure difference (hereinafter, referred to as a high temperature flow path pressure difference) between the pressure of the BOG sent to the heat exchanger being compressed by the compressor at the front end of the heat exchanger and the pressure of the BOG cooled by the heat exchanger at the rear end of the heat exchanger is equal to or</p>	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020180011 905	2018/1/31
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127	Boil-Off Gas Reliquefaction System and Method of Discharging Lubrication Oil in the Same	<p>Disclosed is a method to discharge lubricant in a system which compresses boil-off gas (BOG) by a compressor, cools the compressed BOG through heat exchange with the BOG before compression in a heat exchanger, and decompresses a fluid, which is cooled by the heat exchange, by a decompressor to reliquefy the BOG. According to the present invention, when one or more conditions among the following conditions are satisfied, the method to discharge lubricant determines that it is a time point to discharge condensed or solidified lubricant. A first condition is that the compressor comprises at least one a lubrication type cylinder and a state, in which a temperature difference (hereinafter, referred to as a temperature difference of a low temperature flow) between a temperature at a front end of the heat exchanger of the BOG used as coolant in the heat exchanger and a temperature of the BOG cooled by the heat exchanger after being compressed by the compressor is equal to or greater than a first set value, is continued for a predetermined period or longer. A second condition is that a state, in which a temperature difference (hereinafter, referred to as a temperature difference of a high temperature flow) between a temperature of the BOG used as the coolant in the heat exchanger and a temperature of the BOG sent to the heat exchanger after being compressed by the compressor is equal to or greater than the first set value, is continued for a predetermined period or longer. A third condition is that a state, in which a pressure difference (hereinafter, referred to as a pressure difference of a high temperature flow path) between a pressure at the front end of the heat exchanger of the BOG sent to the heat exchanger after being compressed by the compressor and a pressure at a rear end of the heat exchanger of the bot cooled by the heat exchanger is equal to or greater than a second set value, is continued for a predetermined period or</p>	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020170097 317	2017/7/31
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128	Gas leakage detection system of the vessel	<p>The present invention relates to a leaked gas detection system of a liquefied gas carrier, comprising : one or more sensors; a management server; and an alarm unit. The present invention is able to secure a more improved reliability of detecting harmful gases.(10) Detection sensor(12) First heater and electrode(13) ZnO-based detection film(14) Second heater and electrode(15) SnO₂-based detection film(16) Microprocessor(20) Management server(21) Database(30) Alarm unitCOPYRIGHT KIPO 2017</p>	NST CO LTD	KR1020150169 524	2015/11/30
129	DEVICE FOR PROVIDING HEAT SOURCE USING PHASE CHANGE MATERIAL	<p>The present invention relates to a device for providing heat source using a phase change material. According to one embodiment of the present invention, the device comprises : a diesel engine unit operating a diesel engine when a submarine is snorkelling and generating exhaust gas when the diesel engine is operating; a phase change material unit receiving heat of the exhaust gas generated in the diesel engine unit and accumulating latent heat due to phase change; and a reforming reaction unit receiving the latent heat accumulated in the phase change material unit and performing reforming reaction.(100) Diesel engine unit(200) Phase change material unit(300) Reforming reaction unitCOPYRIGHT KIPO</p>	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020160183 403	2016/12/30

130	REINFORCEMENT APPARATUS FOR FILLING PIPE OF PUMP TOWER IN LNG CARGO TANK	<p>The present invention relates to an apparatus to reinforce a filling pipe of a pump tower for a liquefied natural gas (LNG) tank. According to the present invention, with respect to an emergency pipe spaced apart from one side discharge pipe from a pair of discharge pipes at a predetermined distance, a filling pipe attached to the emergency column as a sleeve shape is separated from the other side discharge pipe from the pair of discharge pipes at a predetermined distance and is supported by a reinforcement unit forming an inner surface spaced apart from the outer circumferential surface of the filling pipe at a predetermined distance in the vertical longitudinal direction of the filling pipe while being vertically supported by a strut. Accordingly, the apparatus is able to cope with a thermal shrinkage deformation of the filling pipe continuously exposed to an environment with a severe temperature difference between the inside and the outside in the pump tower installed inside the LNG tank, and is also able to provide a load supporting structure. According to the present invention, the apparatus comprises the discharge pipe, the emergency column, the filling pipe, the strut, and a reinforcement unit. COPYRIGHT KIPO 2018</p>	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020160181 609	2016/12/28
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131	Air cap to the sealed with resin coating buoy the green form	<p>The present invention relates to a buoyant material used in a buoy for fish farms, a buoyant bucket for work barges, and a buoy for fishing gears. Most buoyant materials are made of foamed Styrofoam and cause small grains to float around when damaged by waves, winds, or fishes and shellfishes such as barnacles, that cannot be easily recovered, which is the root cause of a great pollution of the marine environment. Thus, it is being attempted to remove Styrofoam from the ocean all over the world. In recent years, as an alternative, a synthetic resin is coated on foamed Styrofoam or a buoyant bucket is manufactured by plastic injection, but a synthetic resin coating agent is damaged or the plastic injection is broken when used, and thus are unable to serve as an alternative. Accordingly, the present invention is configured to manufacture an environment-friendly buoy which can be used as a buoy for fish farms and a buoyant bucket for work barges by rolling an air cap, being used as a packaging material and a heat insulating material, into a plastic branch pipe to make a cylindrical column, and coating the same with a synthetic resin to seal the same (pure urea and modified polyurea super-G, PP, PE, and thermoplastic materials, and the like).COPYRIGHT KIPO 2018</p>	CHOI JI HYUN	KR1020160130 346	2016/10/8
132	LNG LOADING SYSTEM FOR LNG CARRIER AND METHOD THEREOF	<p>An LNG shipping system of an LNG carrier according to the present invention loads LNG into a supplying pipe connected to a primary tank by using a connecting pipe arbitrarily or permanently installed and stores vaporized boil-off gas (BOG) when the LNG is shipped to the primary tank, and a portion of the gas or boil-off gas (BOG) in a secondary tank is discharged to atmosphere through a vent mast of a liquid main pipe. Accordingly, it is possible to increase flow rate when the LNG is loaded into the primary tank, thereby shortening LNG loading time and reducing the boil-off gas (BOG) discharged to the outside, thereby reducing LNG cost and reducing environmental pollution. It is possible to secure safety during an LNG line running operation.</p>	대우조선해양 주식회사	KR1020160102 815	2016/8/12

133	Gas turbine and method of operating the same novel 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	KR1020177033 412	2016/4/16
134	CARGO TANK STRUCTURE AND OCEAN STRUCTURE HAVING THE SAME	The present invention relates to a cargo tank structure and a marine structure having the same, wherein a secondary barrier structure is formed with an external barrier forming an internal wall of a hull and an internal barrier in which liquefied gas is stored, and further, an insulation member is coupled to an internal surface of the external barrier to form one or a plurality of insulating layers. Therefore, the insulation member is not exposed to the outside of a tank to minimize dangerousness of fire in case of construction. Moreover, the insulation member is placed within a thickness of the tank to increase a size of the tank, and when forming the insulation member in multiple stages, insulation performance and strength of the tank can be more improved.COPYRIGHT KIPO 2018	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020170002 894	2017/1/9
135	Dual structure for treatment of marine won dedicated nuclear waste Reactor	The present invention relates to a dual structure high temperature gas furnace nuclear reactor facility for treating a nuclear waste for a marine nuclear plant having a dual structure block tank dust collector in order to control nuclear waste treatment to continuously operate a nuclear plant.COPYRIGHT KIPO 2018	LEE WOO SUNG	KR1020180016 632	2018/2/12
136	Dual construction of ocean won dedicated nuclear waste treatment gas cooling reactor facility	The present invention relates to a dual structure gas-cooled reactor facility for nuclear reactor waste processing for a marine nuclear power plant. More particularly, the dual structure gas-cooled reactor facility comprises a dual structure block tank dust collector or a dual structure storage tank and floating-type dock carriers. The technical problem to be solved by the present invention is to improve the safety of the reactor facility.COPYRIGHT KIPO 2018	LEE WOO SUNG	KR1020180013 700	2018/2/5

137	Dual-structure fast reactor breeder reactor facility for ocean won private nuclear waste treatment	<p>The present invention relates to a dual-structure fast breeder reactor facility for nuclear waste treatment for a marine nuclear power plant, and more particularly, to a dual-structure fast breeder reactor facility for nuclear waste treatment for a marine nuclear power plant, wherein the dual-structure fast breeder reactor facility includes a dual structure cooling water storage tank, a fishway tunnel that is a means for transporting cooling water and loess mixture of a control product for preventing nuclear fuel explosion, and construction machinery installed in a sinking preventing staying vessel and a tug boat at the mouth of river and on the sea, such that floating docks of small-sized, medium-sized, and large-sized marine nuclear power plants are put to the mouth of river and to the ocean, thereby including floating dock transporting vessels which are dual-structure barges for nuclear waste treatment for activation of a nuclear power plant so as to transport a connection structure of a dual-structure block tank dust collector and to perform nuclear waste treatment regulation for a sustained nuclear operation.COPYRIGHT KIPO 2018</p>	LEE WOO SUNG	KR1020180013703	2018/2/5
138	Fuel collection and supply system for ship	<p>Provided is a fuel collecting and supplying system for a ship. The fuel collecting and supplying system comprises : a crude oil storage tank; a liquefied natural gas (LNG) storage tank; a compressor for pressing oil mist generated from the crude oil storage tank; a condenser for cooling and condensing the oil mist passed through the compressor; a gas and liquid state conversion module including a first gas liquid separator for separating gas and liquid states of the oil mist passed through the condenser, and an LNG evaporator for gasifying LNG supplied from the LNG storage tank by having heat exchange with the gas state oil mist separated from the first gas liquid separator; a first fuel supply pipe for supplying the gas state of the oil mist generated in the gas and liquid state conversion module to a gas turbine; and a second fuel supply pipe for supplying LNG generated in the gas and liquid state conversion module to an engine, thereby capable of improving energy efficiency and easily collecting available fuel leaking as the oil mist or the like.COPYRIGHT KIPO 2018</p>	SAMSUNG HEAVY IND CO LTD	KR1020160141402	2016/10/27

139	Lower - evaporator assembly fluid distribution	<p>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.</p>	LOCKHEED CORP	KR1020187000 361	2016/6/10
140	FRESH WATER GENERATING SYSTEM AND GENERATING METHOD	<p>PURPOSE : A tide system and tide method thereof is provided to reduce the size of an entire system and to save the energy by supplying each consumer with clear water which is produced according to the determined grades for uses. CONSTITUTION : A tide system includes a seawater supply pump(5, 5a), and a first tide unit(10) and a second tide unit(20) The seawater supply pump is installed on and connected to first transfer piping(4, 4a). The first tide unit is installed at the downstream side of the seawater supply pump. The first tide unit converts the supplied seawater into the first clear water. The second tide unit converts the first clear water into the second clear water.</p>	대우조선해양 주식회사	KR1020110051 934	2011/5/31
141	SUPPORT STRUCTURE FOR LOADING AND UNLOADING DEVICE OF STORAGE TANK	<p>Storage tank loading and unloading device support structure is disclosure with each other. Loading and unloading device of the present invention embodiment example according to storage tank storing liquid cargo support structure is coupled to the tank side wall projecting at the side-walls of storage tank having a support unit and a plurality of supporter, a plurality of supporter and supporting through the support removably joined to the hanger rod slidably moved, at least one of a plurality of supporter coupled to hanger rod support horizontal movement locking unit and hanger rod coupled fit relayed number, according to the outer surface of the pipe so as to permit vertical displacement pipe thermal stress can slide covered a plurality of pipe holder having a predetermined wavelength.</p>	삼성중공업 주 식회사	KR1020160043 284	2016/4/8

142	High efficiency OTEC system with dual ejector type	<p>The present invention relates to a dual ejector type high efficiency ocean thermal energy conversion system. The purpose of the present invention is to provide the dual ejector type high efficiency ocean thermal energy conversion system of which power generation and system efficiency are improved by increasing a difference between pressures of an inlet and an outlet of a turbine by applying a dual ejector, a motive pump, and a motive evaporator. In the ocean thermal energy conversion system wherein the turbine, a condenser, the evaporator, and the pump are successively equipped, the ocean thermal energy conversion system includes : the dual ejector wherein a first ejector and a second ejector are successively formed between the outlet of the turbine and the condenser; a first distributor installed in an outlet of the condenser to distribute some of a coolant to the evaporator and the remaining coolant to the first ejector and the second ejector; the motive pump installed in an outlet of the first distributor and increasing a pressure of a working fluid with a second distributor to make the working fluid in a low pressure fluid state of a motive unit of the first and second ejectors function as a motive working unit at a high pressure which is a driving source of the ejectors; and the pumps installed in the outlet of the first distributor and increasing a pressure of the working fluid to send the working fluid to an inlet of the evaporator.(10) Turbine(100) Distributor 2(20) Generator(30) First ejector(40) Second ejector(50) Condenser(60) Distributor 1(70) Pump(80) Evaporator(90) Motive pump(AA) Surface water(BB) Deep waterCOPYRIGHT KIPO 2017</p>	KOREA INSTITUTE OF OCEAN SCIENCE TECHNOLOGY	KR1020160106881	2016/8/23
143	Power generating system using salinity gradient and Method of power generating using salinity gradient	<p>The present invention relates to a power generation system using a salinity gradient and a method of power generation using a salinity gradient. A power generation system using a salinity gradient according to the present invention comprises : a salinity gradient power generation module including a brine flow area and a fresh water flow area facing each other with a membrane therebetween; a turbine generating electricity using brine discharged from the salinity gradient power generation module; and a brine supply unit supplying warm drainage of a power plant flowing from one side to the brine flow area.(AA) Sump tankCOPYRIGHT KIPO 2017</p>	KOREA HYDRO NUCLEAR POWER CO LTD	KR1020150085386	2015/6/16

144	Device and method of supplying seawater for floating vessel	Marine suspensions of disclosure is stopped device and method are disclosed. According to the present invention for regasification unit with regasifying liquefied gas in offshore suspensions, regasifying liquefied gas discharged outside temperature of the heat transfer gas is heat-exchanged seawater pump for supplying seawater seawater temperature difference while to be comparatively small to reduce the power dissipation in the occurs.	대우조선해양 주식회사	KR1020150117 936	2015/8/21
145	ELECTRIC POWER TRANSPORT SHIP USING SECONDARY BATTERY AND ELECTRIC POWER TRANSPORT SYSTEM AND METHOD USING THE SAME	PURPOSE : An electric power transport ship using a secondary battery and an electric power transport system and method using the same are provided to prevent environmental contamination and the exhaustion of resources by improving the efficiency of green energy.CONSTITUTION : An electric power transport ship (100) using a secondary battery comprises an electric power storage unit (110) and a control unit (150). The electric power storage unit is composed of multiple battery packs (101) connected in a series and in a row. The battery packs comprise two or more secondary batteries. The control unit monitors the electrical properties of the electric power storage unit and outputs a control signal for controlling the charging and discharging of the electric power storage unit.COPYRIGHT KIPO 2013	LG CHEM LTD	KR1020120015 262	2012/2/15

146	Multifunctional buoy bot system	<p>The present invention relates to a multifunctional buoy bot system in a buoy observing weather, creation of a rip current and approach of underwater creatures, the multifunctional buoy bot system comprising : a robot maintaining part controlling level maintenance and movement of the buoy; a monitoring part observing atmospheric phenomena by sensing generation of a rip current and monitoring approach of underwater creatures; an alarm part receiving a monitoring result from the monitoring part, determining whether the current circumstance is dangerous, and sending a signal to at least one of a management server and a member around the buoy through a wireless communication; and a safety zone deviation sensing part sensing at least one of a person being located outside a safety line, a person being located at a place close to the safety line or a person being located on the safety line and delivering a signal to the alarm part. The present invention is to provide a multifunctional buoy bot system that can decrease damage of human life by chasing or luring underwater creatures to thus prevent occurrence of a dangerous circumstance and by performing a real time relief work providing a life buoy as well as giving a warning against damage of human life.</p>	임태현; 오준영	KR1020150130 504	2015/9/15
147	A Offshore Structure	<p>The structure ten paragraph elements generator are disclosed. Marine structure has one end anchored to the sea floor and a plurality of legs separated from the other end of the sea; at least a portion of the sea water penetration along multiple legs can be separated from the platform; a plurality of legs at least partially engages with the at least one, first end area of the sea temperature 1 1 with the first heat transfer line; a plurality of legs which bind with at least one of at least a portion, 1 of the sea area is higher than the temperature at the first temperature with the first temperature area 2 with one end arranged in heat transfer line 2; 1 and 2 and in heat exchange with the heat transfer line heat transfer line for generating power by thermoelectric generator, marine structure.</p>	삼성중공업 주식회사	KR1020150085 648	2015/6/17

148	FLEXIBLE HEAT SINK MODULE APPARATUS	<p>The present invention relates to a thermoelectric module device. More specifically, the present invention relates to the thermoelectric module device, wherein a plurality of thermoelectric plates is disposed to secure the maximum interval between a high temperature unit and a low temperature unit, and a heat sink comprising the low temperature unit is cooled by endothermic reaction of combustion gas to secure a large temperature difference between the low temperature unit and the high temperature unit to improve power production efficiency.COPYRIGHT KIPO 2017</p>	KOOKMIN UNIVERSITY INDUSTRY ACADEMY COOPERATION FOUNDATION	KR1020160055777	2016/5/4
149	BUSH DEVICE FOR SHIP	<p>The invention relates to a spool valve and the resultant operating condition of the ship propeller shaft alignment bush constant current device. According to one aspect of the present invention the ship propeller shaft (propeller shaft) for displacement type bulb arranged to ship's spool valve inserted into the propeller shaft in supporting bush, the bush and the tubular phase variable alignment tube, the variable alignment vessel comprises the outer surface and having an interior surface facing toward the propeller shaft stern bulb, the center of the first outer surface and said inner first followed 1 1 frequent power transmission structure, the inner surface has a first radius of curvature center of frequent followed 2 2 first, the first radius of curvature is the radius of curvature 1 2 operate different combustion chamber.</p>	삼성중공업 주식회사	KR1020150124896	2015/9/3
150	Boiling water nuclear reactor facility for treatment of nuclear waste	<p>The present invention relates to a boiling water nuclear reactor facility for nuclear waste treatment. The boiling water nuclear reactor facility for nuclear waste treatment according to an embodiment of the present invention includes a dual structure block tank collector of a dual structure egg type for nuclear waste treatment in a hydro and nuclear power plant or a dual structure storage tank included in a dual pipe structure type boiling water nuclear reactor facility. The boiling water nuclear reactor facility for nuclear waste treatment according to the present invention can produce power by including a nuclear power generation device and hydroelectric power generation devices and can convert potential energy of water into kinetic energy.COPYRIGHT KIPO 2017</p>	LEE WOO SUNG	KR1020170013468	2017/1/31

151	<p>SYSTEM AND METHOD FOR COMPLIANCE OF ALLOWABLE POWER GENERATION CAPACITY TO ELECTRICAL GRID IN OPEN SEA TEST SITE FOR OCEAN ENERGY DEVICE USING LOAD BANK</p>	<p>The present invention relates to a system and a method for compliance with an allowable system power generation capacity on an open sea test site for an ocean energy device using a load bank which consume power exceeding an allowable system power generation capacity on an open sea test site by a load bank if the power exceeding an allowable system power generation capacity is generated and link electric energy of the allowable system power generation capacity to an electrical grid. The system for compliance with an allowable system power generation capacity on an open sea test site for an ocean energy device using a load bank comprises : a plurality of ocean energy generation facilities installed in the sea to acquire energy generated by the sea; a seabed cable to transmit energy acquired from the ocean energy generation facilities; a first substation to detect the amount of energy acquired from the ocean energy generation facilities by the seabed cable to consume exceeding energy and convert receivable energy of an allowable system power generation capacity into electricity; a land cable to transfer electricity inputted from the first substation; and a second substation to receive electricity of the allowable system power generation capacity transferred by the land cable to transmit the electricity to a system. Costs required for extending the allowable system power generation capacity can be reduced, and a period required for an approval process can be reduced.(120) Seabed cable(132) First power system(134) Power management unit(136) Load bank(138) Second power system(160) Land cable(170) Second substationCOPYRIGHT KIPO 2017</p>	<p>KOREA INSTITUTE OF OCEAN SCIENCE TECHNOLOGY</p>	<p>KR1020160110324</p>	<p>2016/8/29</p>
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152	Pressurized water nuclear reactor for nuclear disposal	<p>The present invention relates to a pressurized water nuclear reactor for nuclear waste disposal, and more particularly, to a pressurized water nuclear reactor for nuclear waste disposal of an ocean nuclear and hydroelectric power plant including a dual structure block tank collector of a dual structure egg type for the nuclear waste disposal or a dual structure block tank collector comprising nuclear waste disposal execution for continuously operating a nuclear power plant in the nuclear and hydroelectric water nuclear power plant. The present invention includes the dual structure block tank collector, a dual structure block tank which comprises a pressurized water nuclear reactor facility by including an inner block tank and an outer block tank, and a floating dock of the ocean nuclear and hydroelectric power plant. Therefore, the present invention can improve the safety of the nuclear power plant. COPYRIGHT KIPO 2017</p>	LEE WOO SUNG	KR1020170001 149	2017/1/4
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153	System and Method of Ocean Thermal Energy Conversion on FLNG	<p>According to the present invention, as electric energy is produced with seawater as a material by using characteristics of FLNG, floating for a long time around one marine gas field, the present invention is capable of reducing costs for the maintenance of the FLNG by eliminating the need for a power generating turbine and an extra heat source by obtaining both heat and coldness from the sea. Moreover, the electric energy, generated from the FLNG, is transmitted to the land by using the characteristics of the FLNG, and a land power plant is normally built in a coastal land so the transmission is performed through a transmission infrastructure of an existing power plant. Therefore, the present invention is capable of being relatively free from securing an area for the construction of the land power plant, reducing time for the construction while promoting the stability of power supply to the land, and maintaining the economy of scale through seawater temperature difference power generation. Moreover, the present invention is capable of having mobility, enabling the relatively stable use of the seawater as an energy source, and enabling planned power generation for basic power by predicting seasonal changes. According to the present invention, the system to generate power with a seawater temperature difference of FLNG is capable of producing electric energy by using a temperature difference in the seawater by being installed in the FLNG, and using the electric energy, produced through the temperature difference, as power for the FLNG.</p>	DAEWOO SHIPBUILDING MARINE	KR1020150073 946	2015/5/27
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154	High-efficiency ocean thermal energy conversion (OTEC) applying a liquid-vapor ejector and a motive pump	<p>According to the present invention, a high-efficiency ocean thermal energy conversion system applying a distributor, a liquid-vapor ejector, and a motive pump comprises : a vaporizer to allow transported refrigerant liquid to exchange heat with surface layer water to convert the refrigerant liquid into high-temperature high-pressure refrigerant vapor; a liquid-gas separator installed on an exit of the vaporizer to separate the refrigerant in a liquid and a gaseous form; a distributor installed on an entrance of the vaporizer to separate a pipe entering the vaporizer in multiple directions; a turbine to use the refrigerant in a high-pressure gaseous form transported from the liquid-gas separator or the vaporizer to produce power; a motive pump which branches off from the distributor or increases a pressure of the refrigerant in a liquid form separated from the liquid-gas separator; a liquid-vapor ejector to mix the low pressure refrigerant in a gaseous form passing through the turbine and the high pressure refrigerant in a liquid form passing through the motive pump to have an expansion and an compression process; a condenser to exchange heat between the refrigerant mixed by the liquid-vapor ejector and the surface layer water to condense the refrigerant; and a refrigerant circulation pump to increase the pressure of the refrigerant condensed by the condenser to an evaporating pressure and circulate the refrigerant.</p>	KOREA INST OCEAN SCI TECH	KR1020140182 509	2014/12/17
155	Efficient open cycle ocean thermal energy conversion (OTEC) using vacuum membrane distillation (VMD) for selective power generation and seawater	<p>Provided is efficient open cycle ocean thermal energy conversion (OTEC) using vacuum membrane distillation (VMD) for selective power generation and seawater desalination, wherein the OTEC withdraws seawater on a surface layer to flow into the VMD placed in a vacuum chamber by enabling steam generated from a VMD device to flow into a turbine to generate power by operating the turbine, and a heat exchange device is provided so as to desalinate condensed steam by heat exchanging the steam used in a turbine power generation device with deep water at a lower temperature.COPYRIGHT KIPO 2016</p>	KOREA INSTITUTE OF OCEAN SCIENCE TECHNOLOGY	KR1020140150 360	2014/10/31

156	LNG BOIL OFF GAS RELIQUEFACTION SYSTEM AND METHOD OF THE SAME	<p>According to an embodiment of the present invention, a reliquefaction system of liquefied natural gas (LNG) boil off gas (BOG) includes : a storage tank storing LNG; a high-pressure gas compressor which compresses BOG supplied from the storage tank; a heat exchange unit which enables the heat exchange of high pressure BOG (compressed LNG BOG) through a temperature difference between the compressed LNG BOG from the high-pressure gas compressor and the BOG supplied from the storage tank; an engine which receives the high pressure gas (compressed LNG BOG) compressed through the high-pressure gas compressor; a pressure reduction valve which reduces the pressure of the compressed LNG BOG exchanging heat through the heat exchange unit; and a gas-liquid separator which separates an LNG BOG mixture with a pressure reduced by the pressure reduction valve into gas and liquid. The reliquefaction system also additionally includes : a high-pressure coolant storage tank which is arranged between the high-pressure gas compressor and the engine and stores the compressed LNG BOG compressed by the high-pressure gas compressor; a high-pressure engine fuel tank which supplies the compressed LNG BOG supplied from the high-pressure coolant storage tank to the engine; and a branch valve which is arranged between the heat exchange unit and the liquid-gas separator to supply the LNG BOG mixture exchanging heat through the heat exchange unit.</p>	VALMAX TECH CORP	KR1020160036098	2016/3/25
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157	Watertight sliding door	<p>Inward and outward the present invention a in the inlet communicates and door frame, said on of door frame, the right-and-left direction on the front side of lower guide rail with locking device along the sliding allows the door to hydraulic or pneumatic pressure opening and closing the inlet by search relates to watertight sliding door, more particularly said on of door frame, front and lower on of door frame, lower front support is the lever in contact each tilted surface is formed like wherein at, said on of door frame, lower front to has the guide protrusions to the upper the door is formed on the sliding easily, and projected over the forwardly and configured to be tilted surface is formed like, to door contact contacts the inclined surface of said door frame of, lower support is for afforesting an incline of door frame the opposite direction so as to protrude tilted surface is formed like the inventive arrangement is characterized in that the outside relates to sliding door. Thus, on of door frame, is converted into lower vertically disposed with respect in front oriented so the doors are closing which is configured to be easily, and projected over the, output efficiency are increased a corresponding door surface concave crooked angle each other is formed of the movement of the door at the time of sealing door frame clamped to prevent the phase change, when the moment is urged sealing is configured to rotation angle value of a steering wheel so as to thereby prevent wear of sealing, thereby more door frame door watertight closely the oxidation or reduction in the state may be maintained a certain.</p>	JO HEA JUNG	KR1020150052 565	2015/4/14
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158	Driving method of watertight sliding door	<p>Inward and outward the present invention a in the inlet communicates and door frame, said door frame secured in sliding manner to open/close watertight sliding door driving method relates to, more particularly on of door frame, lower front to has the guide protrusions to the upper the door is formed on the sliding easily, and projected over the forwardly and configured to be tilted surface is formed like, said door of, even rear lower contact contacts the inclined surface of said door frame for afforesting an incline of door frame so as to protrude the opposite direction the tilted surface is formed like, the right-and-left direction in front of said door frame guide rail with locking device along the hydraulic or pneumatic for driving a sliding allows the door to device; sliding door along the guide rail said. door of inclined surfaces and step of contact of the bevel of a door frame; contacts the inclined surface of said door frame in contact the bevel of a door device operated through for manually pushing or pulling the holding door of door and frame thereof is transmitted to the solenoid housing and door frame frame tightly acids in vitro, ex vivo or provided to maintain water-tightness is characterized by driving sliding door the outside relates to method. Thus, on of door frame, is converted into lower vertically disposed with respect in front oriented so the doors are closing which is configured to be easily, and projected over the, output efficiency are increased a corresponding door surface concave crooked angle each other is formed of the movement of the door at the time of sealing door frame clamped to prevent the phase change, when the moment is urged sealing is configured to rotation angle value of a steering wheel so as to thereby prevent wear of sealing, thereby more door frame door can be provided to maintain water-tightness closely the oxidation or reduction in the state a certain</p>	JO HEA JUNG	KR1020150052 574	2015/4/14
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159	MODULAR SECTION OF WATER PIPE, WATER PIPE INCLUDING SUCH SECTIONS, AND OCEAN THERMAL ENERGY SYSTEM INCLUDING SUCH A WATER PIPE	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').	DCNS	KR1020167021 545	2015/2/6
160	FLOATING STRUCTURE	The present invention relates to a floating structure and, more specifically, to a floating structure which has a storage tank to store high-temperature fluid therein. According to an embodiment of the present invention, the floating structure comprises : a storage tank which stores high-temperature fluid therein; a low-temperature heat source which has a lower temperature than the high-temperature fluid; and a generation part which is formed between the storage tank and the low-temperature heat source and generates electricity using a temperature difference between the storage tank and the low-temperature heat source.COPYRIGHT KIPO 2016	SAMSUNG HEAVY IND CO LTD	KR1020150038 651	2015/3/20
161	Public water landfill of fisheries development apparatus even the ocean with a tunnel of traffic equipment	The present invention relates to a fisheries development apparatus of a public water landfill having marine fishway tunnel traffic equipment and, more specifically, relates to a fisheries development apparatus of a public water landfill having marine fishway tunnel traffic equipment, which comprises : a floating dock as a barge for a landfill body; a transfer body connected to the floating dock to be appropriate to an installation standard for cultivating marine products; and a pneumatic dissecting facility in the shape of maintaining the degree of freshness of a fish and shellfish dissecting device.COPYRIGHT KIPO 2016	LEE WOO SUNG	KR1020160091 522	2016/7/19

162	LARGE FLEXIBLE SUBMARINE CONDUIT SYSTEM	This large flexible submarine conduit system (10) for a platform floating at sea comprises : - a flexible conduit (12) comprising a plurality of sheets (26A, 26B, 26C) linked together by a sliding closure (28) on each of the lateral sides of said sheets, the conduit (12) comprising means for maintaining a circular cross-section of the conduit (12) which are both flexible and flattenable; and - a device capable of being placed on the platform at the upper end of the conduit (12), allowing winding and unwinding of each of the sheets (26A, 26B, 26C) of the conduit (12), this device comprising a drum (14A, 14B, 14C) for each of the sheets (26A, 26B, 26C).	DCNS	KR1020167012 412	2014/11/12
163	POWER GENERATION APPARATUS USING WAVE FORCE AND THERMAL DIFFERENCE	The present invention relates to a power generation apparatus using wave force and a temperature difference, which remarkably improves power generation efficiency and improves practicality by generating electric energy using a temperature difference of the seawater or river water. The power generation apparatus using wave force and a temperature difference comprises : a buoyancy part (10) which has buoyancy to be exposed to the surface of water and is vertically moved by wave and tidal power; an anchor cable (30) which is connected to the buoyancy part (10); and a generation part (40) which is connected to the anchor rope (30) to generate or store electric energy.COPYRIGHT KIPO 2016	EL TEC CO LTD	KR1020150187 363	2015/12/28
164	Supercritical Carbon Dioxide Power Generation System and Ship having the same	The present invention relates to a supercritical carbon dioxide power generation system, and a ship having the same. The supercritical carbon dioxide power generation system comprises : a heat exchanging unit enabling waste heat of an engine and carbon dioxide to exchange heat; a turbine unit generating power to operate a power generator using the carbon dioxide discharged from the heat exchanging unit to enable the power generator to generate electricity; and a preheating heat exchanging unit enabling the supercritical carbon dioxide and a phase-change medium to exchange heat with each other to heat the phase-change medium which generated steam.	HYUN DAI HEAVY IND CO LTD	KR1020160065 383	2016/5/27

165	Reactor equipment of distribution input device for the treatment of nuclear waste in the ocean nuclear	The present invention relates to a distribution input apparatus of a reactor facility for treating nuclear waste in an ocean nuclear power and hydroelectric power plant having a double-structured block tank dust collector, which performs a nuclear waste treating control to continuously operate a nuclear plant while excluding a natural disaster effect by using a disaster preventing apparatus.	LEE WOO SUNG	KR1020160058 611	2016/5/13
166	Supercritical Carbon Dioxide Power Generation System and Ship having the same	The present invention relates to a supercritical carbon dioxide power generation system and a ship having the same. The supercritical carbon dioxide power generation system comprises : a heat exchange unit for heat-exchanging waste heat of an engine and carbon dioxide; a turbine unit generating power to operate a generator by using the carbon dioxide discharged from the heat exchange unit for the generator to produce electricity; a first steam heat exchange unit for heat-exchanging supercritical carbon dioxide and a phase change medium for the phase change medium to be heated to generate steam; and a second steam heat exchange unit for heat-exchanging a cooling medium to cool the engine and the phase change medium supplied to the first steam heat exchange unit.	HYUNDAI HEAVY INDUSTRIES CO LTD	KR1020140099 330	2014/8/1

167	Cold energy system	<p>According to an embodiment of the present invention, the cold energy system of the present invention comprises : a PCM stored cold energy tank which exchanges heat with the fuel supplied from a liquefied gas storage tank to the consumer and where a phase change material, which changes phase to store the cold energy of fuel, is stored; and a cold energy supply line connected from the PCM stored cold energy tank to a cold energy accommodating unit to supply cold energy. The phase change material comprises : a first material having a first phase change point; and a second material which has a second phase change point which is higher than the first phase change point and which is stored separately from the first material. According to the present invention, the cold energy system of the present invention, when liquefied gas at an extremely low temperature is heated to be used as fuel, stores the cold energy discharged from the liquefied gas in the phase change material, and uses it as the cold energy of an air conditioner or for cooling a heat-generating device immediately or after some time. Thus, the present invention can reduce energy by not letting cold energy be discarded but used, and can reduce the production volume of cold energy needed for an air conditioner and a heat-generating device to minimize the energy needed for operation of a ship or a marine plant. COPYRIGHT KIPO 2016</p>	<p>HYUNDAI HEAVY INDUSTRIES CO LTD</p>	<p>KR1020140126 166</p>	<p>2014/9/22</p>
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168	Method of cold energy utilization	<p>According to an embodiment of the present invention, a cold heat utilizing method using a cold heat system which exchanges heat with fuel supplied to a source of demand from a liquefied gas storage tank, and includes a PCM cold heat storage tank for storing a phase change material whose phase is changed to store cold heat of the fuel, and a cold heat supply line connected to a cold heat receiving device from the PCM cold heat storage tank so as to supply cold heat, comprises : a step of measuring an amount of cold heat stored in the PCM cold heat storage tank; a step of measuring a supply amount and a temperature of liquefied gas; a step of calculating a target temperature of the liquefied gas; and a step of discharging the cold heat stored in the PCM cold heat storage tank. According to the cold heat utilizing method in accordance with the present invention, when cryogenic liquefied gas is heated to be used as fuel, cold heat discharged from the liquefied gas is stored in a phase change material and used for cold thermal energy of an air conditioning unit or cooling a heating element, immediately or at intervals. Accordingly, energy can be saved because the cold heat is utilized rather than discarded. In addition, output of cold heat required from the air conditioning unit and the heating device can be reduced, thereby minimizing energy required for driving a vessel or an offshore plant.(AA) Start(BB) End(S110) Measuring an amount of cold heat stored in a PCM cold heat storage tank(S120) Measuring a supply amount and a temperature of liquefied gas(S130) Measuring cold heat discharged from the PCM cold heat storage tank(S140) Calculating a target temperature of the liquefied gas(S150) Monitoring cold heat transferred from the liquefied gas to the PCM cold heat storage tank(S160) Discharging the cold heat stored in the PCM cold heat storage tank</p>	<p>HYUNDAI HEAVY INDUSTRIES CO LTD</p>	<p>KR1020140126 169</p>	<p>2014/9/22</p>
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169	method of cold energy utilization	<p>According to an embodiment of the present invention, a cold heat utilizing method using a cold heat system exchanges heat with fuel supplied to a source of demand from a liquefied gas storage tank, and includes a PCM cold heat storage tank for storing a phase change material whose phase is changed to store cold heat of the fuel, and a cold heat supply line connected to a cold heat receiving device from the PCM cold heat storage tank so as to supply cold heat, and the method comprises : a step of measuring an amount of cold heat stored in the PCM cold heat storage tank; a step of measuring a required amount of the cold heat per apparatus; a step of calculating an amount of the cold heat which should be transferred from the PCM cold heat storage tank to each of the apparatuses; and a step of transferring the cold heat in the PCM cold heat storage tank to each of the apparatuses. According to the cold heat utilizing method in accordance with the present invention, when cryogenic liquefied gas is heated to be used as fuel, cold heat discharged from the liquefied gas is stored in a phase change material and used for cold thermal energy of an air conditioning unit or cooling a heating element, immediately or at intervals. Accordingly, energy can be saved because the cold heat is utilized rather than discarded. In addition, output of cold heat required from the air conditioning unit and the heating device can be reduced, thereby minimizing energy required for driving a vessel or an offshore plant.(AA) Start(BB) End(S10) Measuring an amount of cold heat stored in a PCM cold heat storage tank(S20) Measuring a required amount of the cold heat per apparatus(S30) Measuring a reserved amount and a temperature of seawater(S40) Calculating an amount of the cold heat which should be transferred from the PCM cold heat storage tank to each of the apparatuses(S50) Transferring the cold heat in the PCM cold heat storage tank to each of the apparatuses(S60)</p>	HYUNDAI HEAVY INDUSTRIES CO LTD	KR1020140126 177	2014/9/22
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170	MANUFACTURING METHOD OF LIQUEFIED GAS INSULATION STRUCTURE	<p>A repair method for a liquefied gas insulation structure is disclosed. According to an embodiment of the present invention, a liquefied gas insulation structure is manufactured by stacking a lower insulation board and an upper insulation board prepared in a liquefied gas tank. A secondary barrier is prepared in the top of the lower insulation board. The repair method for a liquefied gas insulation structure comprises a process of repairing the secondary barrier in the case that the secondary barrier is damaged by attaching a repair patch to the damaged part of the secondary barrier. Therefore, the present invention improves the efficiency and productivity of an insulation structure manufacturing process.COPYRIGHT KIPO 2016</p>	SAMSUNG HEAVY IND CO LTD	KR1020140124 271	2014/9/18
171	DEVICE FOR SIGNATURE ADAPTATION AND OBJECT PROVIDED WITH DEVICE FOR SIGNATURE ADAPTATION	<p>The invention pertains to a device for signature adaptation, comprising a surface element arranged to assume a determined thermal distribution, wherein said surface element comprises at least one temperature generating element arranged to generate at least one predetermined temperature gradient to a portion of a first heat conducting layer of said surface element, characterized in that said device for signature adaptation comprises a liquid cooling element arranged to provide at least one liquid flow, thermally contacting an inner portion of said at least one temperature generating element so that thermal energy is dispersed from said at least one temperature generating element.</p>	BAE SYSTEMS HAEGGLUNDS AB	KR1020167003 498	2014/7/2

172	Combined dip tube	<p>The device ripplingthe tube doughnut is stored in an EEPROM through an aperture a plane which radiating pipe assembly having a circular portion firmly attached to the chassis in the user is positioned to be tubes, which fluorescent returned to the above stage, to prevent this phase change to the tubular body of the dextrin must be held by an, in order safely ripplingthe a user's body line and the purchase tube of the proper size and an outer, phase change using power hungry wafer fixing in the case of relationship with infants or children, aperture portion additional device is product purchase the. Thus tip in a central portion the device is thickened surface as a stick having an outer diameter (stick) radiating pipe assembly mouth and which are in a pair or more of connected and connecting the tip of each other, in order to disperse and form of tube after wearer in front tube coupler, the center of tubes that surrounds the torso of user in the form, in the form of the original tube resilient force that back more body of the user by the identity provider is characterised in that it has a in contact with. User's body at the opposite side are adhered tube since a state where the free phase change, returns to connect along body shape manner that locates each badge coupling an portion is separated can be the user is using, a pair of tube when the input is coupled with the streamlined appearance of the bent portion of the S512 and fun conformational user relationship with infants or children can be not feel interruption, output from the battery usually, wearing lifesaving capable of being worn for in low light conditions the ability when use with friction hinge devices formed in a center of the ripplingthe as well as particularly suitable for use in even in a situation where the emergency</p>	Anchanmyeong	KR2020140006 704	2014/9/14
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173	Supercritical Carbon Dioxide Power Generation System and Ship having the same	<p>The present invention relates to a supercritical carbon dioxide power generation system and a ship having the same. The supercritical carbon dioxide power generation system comprises : a heat exchange unit for heat-exchanging waste heat of an engine and carbon dioxide; a turbine unit generating power to operate a generator by using carbon dioxide discharged from the heat exchange unit for the generator to produce electricity; and a preheating heat exchange unit heat exchanging supercritical carbon dioxide and a phase change medium so as to heat the phase change medium to produce steam.(100) Engine(200) Supercharger(300) GeneratorCOPYRIGHT KIPO 2016</p>	HYUNDAI HEAVY INDUSTRIES CO LTD	KR1020140099 347	2014/8/1
174	LNG STORAGE TANK AND INSULATION PANNEL THEREOF	<p>The present invention relates to a liquefied natural gas (LNG) storage tank having a processed groove which is arranged with a corrugated part of a secondary sealing wall on a secondary insulation wall, and an insulation wall of the LNG storage tank. According to an embodiment of the present invention, in a storage tank for storing the LNG, the LNG storage tank includes : a primary sealing wall which liquid-tightens the LNG in contact with the LNG stored in the storage tank; a primary insulation wall which insulates the LNG as being located under the first sealing wall; a secondary insulation wall which insulates the LNG by being installed on an inner wall of the storage tank; and a secondary sealing wall which liquid-tightens of the LNG in case the primary sealing wall leaks, by being located between the primary insulation wall and the secondary insulation wall. The secondary insulation wall includes a plurality of secondary insulation wall panels, and a groove is processed on an upper part of each of the secondary insulation wall panels. A corrugated part is formed on the secondary sealing wall, and the secondary sealing wall is arranged on the secondary insulation wall so that the corrugated part is arranged in the groove or the gap among the secondary insulation wall panels.COPYRIGHT KIPO 2016</p>	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020140089 311	2014/7/15

175	DISASTER PREVENTION VESSEL TO COLLECT LEAKING CRUDE OIL	<p>The present invention relates to a disaster prevention vessel to collect leaking crude oil and, more specifically, to a disaster prevention vessel to collect leaking crude oil, which minimizes labor mobilization by rapidly and cleanly collecting leaking crude oil. The disaster prevention vessel to collect leaking crude oil according to the present invention has an automatic disaster prevention material spraying function and an automatic contaminant collecting function.(1) Auto-scattering function by disaster preventing agent (For example, OFP or the like) compressed air(2) Auto-returning function by disaster-prevented pollution crude oil(3) Enabling transfer to a vacuum pump when the collected pollution crude oil is overloaded(4) Important source of revenue and equipment installation of a professional preventing ship(AA) Plan(BB) Front view(C1, C2) Material for the prevention of disasters(DD) Side drawing(EE) Shipwreck loss crude oil collection preventing function(FF) Important financial resource-W/3M, L/7M, H/3M(GG) Self-power - YAMAHA 200HP four stroke "G" air cooling and removal type oil pressure displacement-type engine(HH) Other mounting function-lighting with 15kW of a single-phase generator, wanting, supplier, other hydraulic system, steering, etc. Crewmen-five peopleCOPYRIGHT KIPO 2016</p>	JOHNG IN KWAN	KR1020160001603	2016/1/6
176	LNG STORAGE TANK AND INSULATION PANNEL SECURING DEVICE THEREOF	<p>The present invention relates to an LNG storage tank, and an insulation panel fixing device thereof, capable of being stable against thermal contraction and minimizing the number of necessary insulation panel fixing devices by installing an insulation panel fixing device of an LNG storage tank in an optimal position. According to an embodiment of the present invention, an LNG gas storage tank includes : a primary sealing wall touching LNG, stored in the storage tank, to seal the LNG; a primary insulation panel placed under the primary sealing wall to insulate the LNG; a secondary insulation panel installed on an inner wall of the storage tank to insulate the LNG; and multiple first insulation panel fixing devices fixing the primary and secondary insulation panels. The first insulation panel fixing devices are installed at the apex of the primary insulation panel.COPYRIGHT KIPO 2016</p>	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020140083669	2014/7/4

177	LNG STORAGE TANK AND INSULATION PANNEL THEREOF	The present invention relates to a liquefied natural gas storage (LNG) tank, which has slits in the upper and lower parts of a first insulating wall, and an insulating wall thereof. According to an embodiment of the present invention, a storage tank for storing LNG therein, comprises : a first sealing wall coming into contact with the LNG stored in the storage tank, for liquid-tight sealing the LNG; and a first insulating wall disposed below the first sealing wall, for insulating the LNG, wherein a plurality of first slits is provided on the top of the first insulating wall, and a plurality of second slits is machined on the bottom of the first insulating wall.COPYRIGHT KIPO 2016	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020140083 670	2014/7/4
178	LNG STORAGE TANK AND INSULATION PANNEL THEREOF	The present invention relates to a liquefied natural gas (LNG) storage tank having slits on the upper portion of a first insulating wall to form a flow channel of nitrogen gas, and an insulation wall thereof. According to an embodiment of the present invention, the LNG storage tank comprises : a first sealing wall coming into contact with the LNG stored in the storage tank, for liquid-tight sealing the LNG; and a first insulating wall disposed below the first sealing wall, for insulating the LNG, wherein the first insulating wall has a plurality of slits provided on the upper portion thereof as a flow channel of nitrogen gas.COPYRIGHT KIPO 2016	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020140083 672	2014/7/4
179	Apparatus for sterilizing microorganism in ballast water of a ship	The present invention relates to an apparatus for sterilizing microorganisms in ballast water of ship and, more specifically, an apparatus for sterilizing microorganisms in ballast water of ship, which has a plurality of ultrasonic oscillators installed on the outer surface of a ballast water pipe and generates strong ultrasonic waves by continuously assigning at least one wave form among a triangular wave, a pulse and a high current sine wave having ± 15 V and 1-5 A respectively to the ultrasonic oscillators or consecutively assigning a triangular wave, a pulse and a high current sine wave having ± 15 V and 1-5 A respectively to the ultrasonic oscillators in a cross signal and sterilizes microorganisms included in sea water flowing via the ballast water pipe with use of ultrasonic waves or removes slowly the same with use of strong impact, comprising a built-in program to control the whole system and a control unit to generate a wave form generating signal.	NK CO LTD; PUKYONG NATIONAL UNIVERSITY INDUSTRY UNIVERSITY COOPERATION FOUNDATION	KR1020130105 503	2013/9/3

180	Connecting Structure And Method For Insulation System	Disclosed are a connecting structure and a connecting method for an insulation system. According to the present invention, the connecting structure for an insulation system is arranged in a hold of a ship or a marine structure. The insulation system comprises a primary sealing wall and a primary insulation wall, and a secondary sealing wall and a secondary insulation wall which are alternately stacked. A support structure is arranged by penetrating the secondary insulation wall, wherein one end portion is coupled to a boss provided in an inner wall of a hull and the other end portion is inserted into a support member having a space which an end portion of the support structure can be inserted into to be coupled to an upper end of the secondary insulation wall.	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020140023850	2014/2/28
181	LIQUID OXYGEN TANK MANAGEMENT SYSTEM FOR SUBMARINE AND MANAGEMENT METHOD THEREOF	Disclosed are a liquid oxygen tank management system for a submarine and a management method thereof. According to an embodiment of the present invention, provided is the liquid oxygen tank management system for a submarine, which comprises a vibrator distributing thermal energy to the whole liquid oxygen tank by applying vibration to the liquid oxygen tank to forcibly mix liquid oxygen wherein the temperature varies with a position inside the liquid oxygen tank.COPYRIGHT KIPO 2016	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020140037289	2014/3/28
182	System for Recycling Waste Heat for offshore Structure	A system for recovering waste heat in an offshore structure is disclosed. According to an embodiment of the present invention, the system comprises : a thermoelectric generation module generating power using heat of an engine and having a plurality of thermoelectric generation units connected to each other in parallel to each other; and a first transformer connected with the thermoelectric generation modules in parallel to each other.COPYRIGHT KIPO 2015	SAMSUNG HEAVY IND CO LTD	KR1020140033211	2014/3/21

183	High efficiency OTEC system using re-open and liquid ejector - steam	<p>The present invention relates to a high-efficiency OTEC system using a steam-liquid ejector and a reheater. More specifically, the high-efficiency OTEC system of the present invention applies a distributor on an exit side of an evaporator in a basic cycle principle to pass through the evaporator, condenser, turbine, and pump; and distributes a flux of a refrigerant to make it easy to distribute the flux of the refrigerant flowing into turbine 1 and the steam-liquid ejector. The high-efficiency OTEC system of the present invention divides the high temperature flux into steam and liquid using a gas-liquid separator on an exit side of the reheater. Here, the high temperature liquid is pressurized with a pump, is mixed by a second mixer, and flows into the evaporator. The heat of vaporization is decreased because of an increase in temperature at an entry of the evaporator, and turbine 2 is applied using the distributor on the exit side of the condenser. As turbine 1 and turbine 2 are designed as parallel turbines, the work done by the turbine is increased; and as the steam-liquid ejector is installed on the entry side of the condenser, the exit pressure of turbine 1 is further decreased and production work done by turbine 1 is increased. Accordingly, the high-efficiency OTEC system of the present invention has a greater efficiency than that of a conventional OTEC system.(AA) Surface water(BB) Deep waterCOPYRIGHT KIPO 2016</p>	KOREA INSTITUTE OF OCEAN SCIENCE TECHNOLOGY	KR1020140132342	2014/10/1
184	Ocean Thermal Energy Conversion System Using Hybrid Heat Source	<p>According to the present invention, a generation system using difference in the temperature of hybrid heat sources comprises : multiple heat source suppliers; a heat storage tank receiving heat from the heat source suppliers; and a generation unit using difference in temperatures. The generation unit including : a first heat exchange part in which a first heat medium absorbing the heat from the heat storage tank exchanges heat with a second heat medium when flowing; a turbine in which the second heat medium flowing through the first heat exchange part generates power when flowing; and a second heat exchange part in which the second heat medium flowing through the turbine flows. The generation system is capable of maintaining and improving the efficiency thereof since the generation unit is capable of using surface seawater of which the temperature dropped in winter is raised by a heat source generated from at least one of a solar heat collector, an incinerator, a wind power generator, and a boiler.(AA) Deep sea waterCOPYRIGHT KIPO 2015</p>	KOREA INSTITUTE OF OCEAN SCIENCE TECHNOLOGY	KR1020130107889	2013/9/9

185	AIR CONDITIONING APPARATUS FOR SHIP	An air conditioning apparatus for a ship is disclosed. The air conditioning apparatus for a ship comprises : a first temperature sensor to sense a temperature of air supplied to an inside of a ship; a second temperature sensor provided in an exhaust fan unit to discharge air inside the ship to the outside; a first cooling unit provided in an air conditioner to supply air inside the ship; a second cooling unit provided in the exhaust fan unit; a connection flow passage to connect the first and the second cooling units to allow a refrigerant to flow in; a circulation pump provided on the connection flow passage to provide a circulation force for the refrigerant; and a control part which receives temperature sensing signals from the first and the second temperature sensors to drive the circulation pump when a difference between the temperatures sensed by the first and the second temperature sensors exceeds a set value.COPYRIGHT KIPO 2015	SAMSUNG HEAVY IND CO LTD	KR1020140027 040	2014/3/7
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186	<p style="text-align: center;">HEAT PUMP TEMPERATURE DIFFERENCE GENERATION UNIT USING DISC THROUGH-HOLE WHEEL REFRIGERANT TURBINE</p>	<p>The present invention relates to a heat pump temperature difference generation unit which generates electricity by operating a refrigerant turbine generator which acquires a rotational force through fluid motions by making a pressure difference using heat in the atmosphere; continuously operates by placing electricity generated in the system by refrigerant motions as power of a refrigerant compressor on an input end; and complexly uses heat, fluid motions, and the rotational force. More specifically, the heat pump temperature difference generation unit is a complex energy system which operates a refrigerant turbine generator using temperature difference of a cold/hot heat pump to divide heat distributed in the atmosphere and using motions of a fluid and a refrigerant flowing in a high pressure coolant pipe at a low or middle speed (20-30 m/s) by the rotational force of the refrigerant compressor; continuously operates the refrigerant compressor by placing again no-cost electricity into the input end; divides the heat distributed in the atmosphere into cold and hot; converts the heat into the rotational force while making a used fluid flow by being divided into a high pressure state and a low pressure state; and continuously facilitates the heat and the fluid. In addition, the heat pump temperature difference generation unit is a generation unit which operates the refrigerant turbine by acquiring strong rotational force by advancing the speed of the fluid motion and the refrigerant flowing through the pipe using temperature difference and compression power. As such, the heat pump temperature difference generation unit forms a circulation system using fusion and a convergence energy converting apparatus which makes energy continuously flow and be transmitted.(300) Heat absorption(400) Heat emissionCOPYRIGHT KIPO 2015</p>	<p>LEE JAE BON; LEE EUN JIN</p>	<p>KR1020140007 517</p>	<p>2014/1/22</p>
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187	Ocean Thermal Energy Conversion System using the low temperature sea water generated in the Floating Storage Regasification Unit, FSRU	The present invention relates to a system using low-temperature seawater generated in a floating storage regasification unit (FSRU) instead of deep sea water as a coolant to condense a working fluid in an organic rankine cycle of an offshore temperature difference power generation system. By using the technology, the present invention does not require a submarine pipe to supply deep sea water in the existing offshore temperature difference power generation system to reduce a construction period of the offshore temperature difference power generation system and reduce construction costs. Moreover, the present invention reuses the low-temperature seawater generated in the FSRU in order to prevent destruction of a marine ecosystem due to a change in the temperature of surrounding sea water when the low-temperature seawater is directly discharged so as to improve efficiency and provide an economic effect.COPYRIGHT KIPO 2015	KIM YOU TAEK; LEE YOON HO	KR1020140000 477	2014/1/2
188	INCREASING THE EFFICIENCY OF SUPPLEMENTED OCEAN THERMAL ENERGY CONVERSION (SOTEC) SYSTEMS	Marine temperature difference (OTEC) power generation system and method is to increase system efficiency is disclosure. In some exemplary, for forcibly compressing and cooling and supplying system collects thermal energy using, and for heating and of a internal for forcibly compressing and cooling and supplying, such as vaporization of hydraulically actuated starting clutch assembly water warming provides OTEC system. In some exemplary, OTEC systems and other the system is provided other energy, energy, and resource continuous top as though from front to back cycle power generation economically in a..	MCALISTER TECHNOLOGIE S LLC	KR1020127007 661	2010/8/16
189	INSULATING STRUCTURE OF LNG CARGO CONTAINMENT SYSTEM	The present invention relates to an insulating structure for an LNG cargo hold for the insulation of an LNG storage tank, comprising : a secondary insulating wall installed on the inner side of a hull; a primary insulating wall installed on the secondary insulating wall; a secondary sealing wall installed between the primary and secondary insulating walls; and a primary sealing wall installed between the LNG storage tank and the primary insulating wall. Each of the primary and secondary insulating walls is composed of upper and lower insulating parts made of different insulating materials.	STX OFFSHORE SHIPBUILDING CO LTD	KR1020130147 345	2013/11/29

190	APPARATUS FOR PREVENTION FALLING DOWN SHIP BLOCK	<p>Disclosed is an apparatus for preventing a ship block from falling. The present invention is provided to improve convenience of usage as the length can be adjusted unlike a conventional apparatus, increasing overall work efficiency by supporting a plurality of ship blocks at once, and thereby preventing the ship blocks from falling. According to an embodiment of the present invention, the apparatus preventing the ship block from falling comprises : a length adjustment bar which can adjust the length corresponding to the distance between a first and a second ship block arranged separately from each other; a fine adjustment bar connected to an end of the length adjustment bar, finely adjusting an approach distance or a separation distance from the length adjustment bar; a first clamp unit combined with an exposed end section of the length adjustment bar, being clamped to a first bracket of the first ship block; and a second clamp unit combined with an exposed end section of the fine adjustment bar and clamped to a second bracket of the second block ship.</p>	SAMSUNG HEAVY IND CO LTD	KR1020130091 458	2013/8/1
191	A SALINITY GRADIENT POWER GENERATION SYSTEM USING A CAPMIX DEVICE	<p>The present invention relates to an open type salinity gradient power generation system using a capmix device. The hybrid salinity gradient power generation system of the present invention comprises : a first salinity gradient power generation device which generates power by salinity gradient using salt water and fresh water, and discharges salt water and fresh water; and a first capmix device into which the salt water and fresh water discharged from the first salinity gradient power generation device are alternately injected. The capmix device is connected with an output end of other salinity gradient power generation device. Also, at least two capmix devices are connected in parallel to alternately inject salt water and fresh water. Therefore, the open type salinity gradient power generation system using a capmix device can have high generation efficiency.</p>	KOREA INSTITUTE OF ENERGY RESEARCH	KR1020130125 168	2013/10/21

192	High efficiency steam ejector ocean temperature difference between the splitter and power systems	<p>The present invention relates to a high efficiency steam ejector ocean temperature difference between a splitter and a power system and, more specifically, relates to a power system configured comprising : a distributor installed in an outlet of a first turbine to facilitate flow distribution of operating fluid flowing in a steam ejector, and in a second turbine the fluid is split using a gas-fluid splitter installed to an outlet of each turbine; a high temperature fluid is pressurized and mixed in a mixer and flowed in an evaporator, thereby reducing an amount of heat evaporation owing to a rise in temperature; a vapor ejector installed to the inlet of a condenser to further reduce an outlet pressure of the second turbine, whereby daily production quantity of the second turbine is increased and efficiency can be enhanced when compared with an existing ocean temperature difference power generation system.(BB) Deep water(AA) Surface waterCOPYRIGHT KIPO 2015</p>	KOREA INSTITUTE OF OCEAN SCIENCE TECHNOLOGY	KR1020130164820	2013/12/27
193	THERMOELECTRIC GENERATION SYSTEM FOR SHIP	<p>Disclosed is a thermoelectric power generation system for a ship. According to an embodiment of the present invention, the thermoelectric power generation system for a ship comprises : a ship engine; a turbocharger producing compressed air using exhaust gas from the ship engine; an intercooler cooling the compressed air from the turbocharger using a coolant, and supplying the cooled compressed air to the ship engine; and a thermoelectric power generation module formed in the intercooler, and generating power using a temperature difference between the coolant supplied from the intercooler and the compressed air flowing through the intercooler. According to the present invention, the thermoelectric power generation system for a ship has the thermoelectric power generating module generating the power using the temperature difference between the coolant and the compressed air in the intercooler cooling the compressed air supplied from the ship engine, thereby recovering waste heat without the reduction of back pressure, wherein the waste heat is dissipated to lower the temperature of the compressed air when the temperature of the compressed air is raised after the compressed air flows through the turbocharger.</p>	SAMSUNG HEAVY IND CO LTD	KR1020130109068	2013/9/11

194	CARGO TANK USING STRAIGHT CORRUGATION MEMBRANE CONNECTION MEMBER FOR EXTREMELY LOW TEMPERATURE SUBSTANCE CARRIER	<p>The present invention relates to a cargo tank of extremely low temperature substance carrier comprising; a hull shell forming the exterior of a cargo tank; a membrane primary barrier which is in contact with an extremely low temperature substance in the inside of the cargo tank; a primary insulating wall installed in an outside of the primary barrier; a membrane second barrier installed in an outside of the primary insulating wall; and a second insulating wall disposed in an outside of the second barrier and fixed to the hull shell, wherein at least one barrier out of the primary barrier or the second barrier includes a wrinkle type corner wrinkle panel on which a number of wrinkle sections are formed continuously in parallel and a flat type main panel formed in a direction different from a direction of wrinkle of the corner wrinkle panel. A cargo tank of extremely low temperature substance carrier according to an embodiment of the present invention bonds a linear curve type wrinkle barrier and a plate type main barrier thereby a breakage from shrinkage of plate type main barrier may be prevented since a linear curve type wrinkle barrier can absorb such shrinkage deformation from the temperature of an extremely low temperature substance. COPYRIGHT KIPO 2015</p>	HYUNDAI HEAVY INDUSTRIES CO LTD	KR1020150033 889	2015/3/11
195	INSULATION DUCT EQUIPMENT AND VESSEL OR OCEAN CONSTRUCTION COMPRISING THE SAME	<p>Insulation pipe line system and is disclosure including boats or offshore structure has. A pipe line system insulation in the embodiment according to one of the device, adapted for by the insulation unit an air conditioner, wherein a pipe unit; piping unit can be branch of fluid piping unit provided in the branch unit; branch unit for externally thermally insulated to prevent a heat-insulating cap unit; and branch unit arranged in the zone of the is capable of being attached/detached is provided, insulation cap unit piping unit which may be locked in its includes fixing unit de.</p>	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR2020130007 807	2013/9/17
196	Ocean Thermal Energy Conversion System Using Discharge of Seawater Heat Pump	<p>An ocean thermal energy conversion system using a discharge of a seawater heat pump comprises : a heat pump unit having a first evaporator to evaporate refrigerants using ocean mid-water as a heat source; an ocean thermal energy conversion unit including a second condenser to condense refrigerants using the ocean mid-water, which has passed through the first evaporator, as a heat source; and a second evaporator to evaporate the refrigerants, which have passed through the second condenser, using ocean surface water as a heat source.</p>	KOREA INSTITUTE OF OCEAN SCIENCE TECHNOLOGY	KR1020130098 995	2013/8/21

197	CARGO TANK FOR EXTREMELY LOW TEMPERATURE SUBSTANCE CARRIER	<p>The present invention relates to a cargo tank for an extremely low temperature material carrier, which comprises : a hull shell which forms the exterior of a cargo tank; a membrane first protective wall which is in contact with an extremely low temperature material inside the cargo tank; a first insulating wall which is installed in the external side of the first protective wall; a membrane second protective wall which is installed in the external side of the first insulating wall; and a second insulating wall which is placed in the external side of the second protective wall in order to be fixated to the hull shell. At least part of the second protective wall is formed of a metal material. The first insulating wall, the second protective wall, and the second insulating wall are combined by a combining unit which penetrates at least part of the first protective wall, the second protective wall, and at least part of the second insulating wall in order.</p> <p>According to the present invention, a cargo hold structure is further combined by a spring and a bolt fastening device in order to improve the coherence of the cargo hold structure to the hull shell and to effectively absorb the loads which asymmetrically applies to a horizontal wall corner unit and an edge, thereby realizing a cargo hold with a stable structure.</p>	HYUNDAI HEAVY INDUSTRIES CO LTD	KR1020130165 972	2013/12/27
198	OCEAN THERMAL ENERGY CONVERSION SYSTEM AND OPERATION METHOD THEREOF	<p>An ocean thermal energy conversion system and a method thereof are disclosed. The ocean thermal energy conversion system includes an evaporating device which evaporates surface level water which remains after evaporating working fluid; and a first turbine driven by the evaporated surface level water discharged by the evaporating device. The present invention also includes a deep water supplying pump to which deep water is introduced; and a condenser which accommodates deep water discharged by the deep water supplying pump and discharges fresh water secured by condensing the evaporated surface level water through heat transfer between the deep water and the evaporated surface level water.</p>	KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY	KR1020130056 717	2013/5/20

199	Freezing prevention apparatus of handrail for ship and method thereof	The present invention relates to a freezing prevention apparatus of a handrail for a ship and a freezing prevention method. The apparatus comprises : a steam generation unit which generates steam using high-temperature and high-pressure exhaust gas discharged from the engine unit of a ship; and a circulation unit which circulates the steam generated from the steam generation unit inside a handrail. Accordingly, accidents caused by freezing of the handrail can be prevented by heating the handrail to a temperature corresponding to outside temperature.(1) Engine unit(2) Steam generation unit(AA) Low-temperature exhaust gas(BB) High-temperature exhaust gasCOPYRIGHT KIPO 2015	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020130067 291	2013/6/12
200	APPARATUS FOR SUBSIDIARY DRIVING AND IMPROVING WAKE OF SHIPS	PURPOSE : An apparatus for auxiliary propulsion and improving the wake of a ship using a water jet unit is provided to prevent a ship from drifting by using a main propeller which is out of order as an auxiliary propulsion function. CONSTITUTION : An apparatus for auxiliary propulsion and improving the wake of a ship using a water jet unit comprises water jet units (100). The water jet units are arranged to be symmetrical and jet water to the upper space of a propeller (220) to reduce the velocity difference of moving fluid and remove the excitation force of a hull (200). When the propeller is rotated, the water jet units jet water within a range between -60 to 60 degrees.	RESEARCH INSTITUTE OF MEDIUM SMALL SHIPBUILDING; PUSAN NATIONAL UNIVERSITY INDUSTRY UNIVERSITY	KR1020130095 725	2013/8/13
201	mast of naval vessels souped up efficiency of radar	The present invention relates to a vessel mast having improved a radar function. The vessel mast comprises a mast ship body having various radars and antennas installed therein; yard arms formed to be perpendicularly extended from both sides of the upper end of the mast and having a radar and a sensor. The mast ship body is formed to be a trapezoidal prism getting smaller in size toward the upper end from the lower end and to be a pyramid shape in a plane having the front side smaller in width than the rear side. Each yard arm is configured to be a trapezoidal prism getting smaller in size toward the outer side. The mast ship body of the mast and the yard arms are formed to be a trapezoidal prism. Therefore, weight reduction and a design for low center of gravity can be possible. Also, a knuckle point does not exist. Therefore, the mast having a stable structure can be provided. Moreover, the RCS signal of radar can be reduced and the interference of a transmission signal does not exist.COPYRIGHT KIPO 2015	HYUNDAI HEAVY INDUSTRIES CO LTD	KR1020130058 442	2013/5/23

202	TEMPERATURE DIFFERENTIAL ENGINE DEVICE	<p>A temperature differential engine device includes a low-boiling-point medium steam turbine (1), a heat absorber (2), a thermal-insulating type low-temperature countercurrent heat exchanger (3), a circulating pump (4), and a refrigerating system (5) which are interconnected to constitute a closed circulating system filled with low-boiling-point medium fluid. The low-boiling-point medium steam turbine (1) and the heat absorber (2) constitute a low-density-medium heat-absorbing working system, and the circulating pump (4) and the refrigerating system (5) constitute a high-density-medium refrigerating-circulating system. The temperature differential engine device can transfer thermal energy into mechanical energy.</p>	Zibo Chemical Industry Company Limited support coordinator	KR1020127022 973	2011/2/9
203	Engine driving system for ship	<p>The present invention relates to an engine driving system for a ship. The engine driving system comprises an engine (10) for driving the ship; a generator (20) generating electricity by receiving energy from the engine (10); a PMS (30) receiving the electricity generated by the generator (20); a fuel pump (40) and a lubricating pump (50) operated by receiving the electricity from the PMS (30) to run the engine; a turbo charger (60) arranged on an exhaust pipe (11) through which exhaust gas of the engine is discharged; and a thermoelectric generator (70) supplying electricity to the fuel pump (40) and the lubricating pump (50) in case of the blackout of the PMS (30). Accordingly, the engine driving system has an effect of improving the safety and reliability for the operation of the ship by preventing general problems caused by the stopped engine, since the thermoelectric generator obtains energy by exchanging heat with the exhaust gas discharged through the turbocharger and supplies electricity to the fuel and lubricating pumps in case of the blackout of the PMS.</p> <p>COPYRIGHT KIPO 2015</p>	HYUNDAI HEAVY INDUSTRIES CO LTD	KR1020130039 031	2013/4/10

204	Handrail for offshore plant to install heat tracing cable	<p>The present invention relates to a handrail for an offshore plant mounted with a heat tracing cable that easily installs the heat tracing cable by inserting a sleeve member of a given shape when the handrail of a horizontal state is connected to an elbow on a support portion extending in a direction perpendicular to the handrail. The handrail includes a cylindrical hollow support portion extending in a vertical direction; an elbow with a first opening being connected to an upper end of the support portion and a second opening being bent at a right angle and extended; and a sleeve member fixed to the second opening of the elbow at one end and inserted into a cylindrical rail of a given length at the other end. An edge of one end of the sleeve member is formed with three bases which are spaced apart from each other at an interval of 120 degrees on the basis of a center axis of the sleeve member and extend at a given length in a vertical direction from the center axis. The sleeve member is tapered from one end to the other end. Since the handrail for preventing falling from a ship has a heating function, a user can easily hold the handrail in a cold weather as well as an ordinary day, and accidents can be prevented in advance. COPYRIGHT KIPO 2014</p>	SEBO TECH CO LTD	KR1020130065 220	2013/6/7
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205	System for thermoelectric generation	<p>The present invention relates to a thermoelectric power generation system comprising : a working fluid storage part; a heat-exchanging part which is connected with the working fluid storage part and exchanges heat between a waste heat discharging part and a working fluid; a flow quantity control part which is installed between the working fluid storage part and the heat-exchanging part and controls the flow quantity of a working fluid; and a thermoelectric module part which is connected between the heat-exchanging part and the working fluid storage part, enables the heat of a working fluid to be transferred to a high-temperature part, and generates power by using the temperature difference between the high-temperature part and a low-temperature part. The flow quantity control part assigns a periodic pulsation to the flow quantity of a working fluid passing through the high-temperature part of the thermoelectric module part. The present invention absorbs waste heat by assigning a periodic pulsation to a heat-storing molten salt working fluid; forms a high-temperature part in a thermoelectric module; and performs highly efficient thermoelectric power generation by using the temperature difference between the high temperature part and a low-temperature part maintaining a constant temperature.COPYRIGHT KIPO 2014</p>	POSCO; RESEARCH INSTITUTE OF INDUSTRIAL SCIENCE TECHNOLOGY	KR1020130077 875	2013/7/3
206	Using waste heat from the generator temperature	<p>PURPOSE : Power generator using temperature difference from waste heat is provided to generate electric energy with torque generated by temperature difference between waste heat and outdoor air. CONSTITUTION : A power generator using temperature difference from waste heat comprises a waste heat concentrator (1), a power generation apparatus (10), and a control box (20). T The waste heat concentrator comprises an absorbing filter connected to a small waste heat concentrator, a blower connected to the absorbing filter, a large waste heat concentrator connected to the blower, and a waste heat supply pipe connected to the large waste heat concentrator. The power generation apparatus is connected to the waste heat supply pipe. The control box is connected to the power generation apparatus. The control box comprises a converter connected to a storage battery, an inverter connected to the converter, and an automatic control device connected to the inverter.</p>	KIM SANG HUN	KR1020120007 120	2012/1/25

207	OTEC cycle device that contains the ejector	<p>The present invention relates to an ocean thermal energy conversion (OTEC) cycle device including a two-phase ejector which is an inflator and, more specifically, to an OTEC cycle device configured to essentially use deep ocean water which is used as cooling water for a condenser and surface water which is used as hot water for evaporation; to apply a reheating process in a reproducer in order to increase the efficiency more than a conventional OTEC system; to apply a geothermal heat exchanger and an expansion abnormality ejector between the reproducer and the condenser in order to reduce the size of the condenser; and to apply an air-cooled heat exchanger to a turbine inlet in order to increase the output of the turbine.(AA) Geothermal heat(130) Surface water(120) Deep ocean waterCOPYRIGHT KIPO 2014</p>	KOREA INSTITUTE OF OCEAN SCIENCE TECHNOLOGY	KR1020130053684	2013/5/13
208	System for Maintenance Liquefied Natural Gas and Liquefied Petroleum Gas Storage Tank for ship	<p>Disclosed is a maintenance and repair system of LNG and LPG storage tanks for a ship. The maintenance and repair system of the LNG and LPG storage tanks for a ship according to one embodiment of the present invention comprises : the LNG and LPG storage tanks for storing LNG and LPG, respectively; a converter for converting the liquid-phase LNG or LPG received from one of the LNG and LPG storage tanks to gas phase by increasing the temperature of the LNG or LPG; a circulator for circulating the gas remaining in the LNG and LPG storage tanks, and receiving the gas-phase LNG or LPG from the converter; a heater for heating the gas-phase LNG or LPG received from the circulator; a pipe for moving the gas-phase LNG or LPG, passing through the converter, to the circulator and the gas-phase LNG or LPG, passing through the heater, to the LNG or LPG storage tank; a detection part for detecting whether or not of the LNG and LPG storage tanks are normal; and a control part for controlling at least one of the circulator, the heater, and the converter according to signals received from the detection part. [Reference numerals] (210) LNG compressor; (220) LPG compressor; (300) Heater; (400) Converter; (600) Detection part; (700) Control part; (710) Auxiliary controller; (800) Inert gas generator</p>	SAMSUNG HEAVY IND CO LTD	KR1020120058638	2012/5/31

209	Mixed refrigerant for a refrigerator, air conditioner and power plant	<p>The present invention relates to a mixed refrigerant consisting of materials usable as a refrigerant (hereinafter, R) or working fluid in a vapor compressing refrigerator/air conditioner or an ocean thermal conversion (OTEC), i.e., R32 and R1270, and more specifically, to a mixed refrigerant/working fluid replaceable to monochlorofluoro methane (CHClF₂, hereinafter, R22 or HCFC22) and R410A which are commonly used in a domestic air conditioner and a commercial air conditioner so far. The two source azeotropic refrigerant of 64%R32/36%R1270 has no problem in use for a long term as the global warming potential is less than R410A by 77.7%, and enables to reduce the size of a turbine, a boiler and a condenser by 50% or so compared to ammonia as the density is increased due to the high vapor pressure. In case of an OTEC plant built in the ocean, the initial investment costs is one of the most important factors in the system building. In this regards, the present invention has the advantage to reduce the size of the plant by 50% or so and show the effects as a single pure refrigerant.COPYRIGHT</p>	KOREA INSTITUTE OF OCEAN SCIENCE TECHNOLOGY	KR1020120080 864	2012/7/24
210	High efficient power plant system of Ocean thermal energy conversion with Cooler and Low-stage turbine	<p>The present invention relates to an ocean thermal energy conversion cycle applied with a cooler and a low-stage turbine. More specifically, in accordance to the present invention, deep ocean water used as a coolant to condensate an ocean thermal energy conversion system and surface water used as hot water to evaporate are basically used, and a cooler is applied between a regenerator and a gas-liquid separator or between the gas-liquid separator and a condenser such that the efficiency can be improved more when compared to an existing ocean thermal energy conversion system; an expansion valve is applied between the gas-liquid separator and the condenser such that the size (the capacity) of the condenser can be reduced when compared to an existing condenser; the low-stage turbine (a turbine 3) is applied between the gas-liquid separator and the condenser such that a turbine output is improved; the included reheating process of the regenerator is applied with the gas-liquid separator such that the efficiency of a middle-stage turbine can be prevented from being deteriorated when wet steam is generated during expansion in a high-stage turbine (a turbine 1).(130) Surface water(120) Deep ocean waterCOPYRIGHT KIPO 2014</p>	KOREA INSTITUTE OF OCEAN SCIENCE TECHNOLOGY	KR1020130032 606	2013/3/27

211	<p>CRYOGENIC LIQUID CONTAINMENT SYSTEM AND CARGO CONTAINMENT SYSTEM FOR LIQUEFIED NATURAL GAS CARRIER USING THE SAME</p>	<p>Disclosed are a cryogenic liquid storage system and a cargo hold of a liquefied natural gas carrier using the same, which are to store and transport a cryogenic liquid such as liquefied natural gas (LNG). The storage system prepared by the present invention comprises a first barrier which is equipped with membranes where creases are formed concavely in order to absorb shrinking and swelling due to thermal deformation when the surface thereof is in contact with a cryogenic liquid; a shock absorbing layer which is installed on the back surface of the first barrier in order to absorb the load applying to the first barrier; and a first insulation layer which is installed for insulation on the back surface of the shock absorbing layer. The cargo hold of an LNG carrier prepared by the present invention comprises vacuum insulation panels which are arranged for insulation on the back surface of the shock absorbing layer; a second barrier which is installed on the back surface of the vacuum insulation panels; and a second insulation layer which is installed for insulation on the back surface of the second barrier. Through the present invention, damage can be effectively prevented by concavely forming the creases of the membranes comprising the first barrier, in turn, by reducing the occurrence of cavitation due to the sloshing of LNG. In addition, the load of shock transmitted to the first insulation layer from the first barrier can be minimized by installing the shock absorbing layer between the first barrier and the first insulation layer. Thus, reliability at ultralow temperatures can be significantly improved by preventing damage to the first and second insulation layers. Furthermore, the first and second insulation layers are formed as the vacuum insulation panel in order to improve the insulation performance; the quality can be guaranteed by lightening the weight thereof and improving the mechanical properties</p>	<p>KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY</p>	<p>KR1020120049 160</p>	<p>2012/5/9</p>
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212	Floating Structure	<p>The device form, used in expansion floating pier , an offshore floating on sea also for collecting waste such as marine waste air intake relates to offshore structure. The cover is attached to the body internal the styrofoam built in a sealed together with synthetic resin which ties up long rope to the buoy high density having a ring which is. The blocks are connected with on a ring thereof which is an important part for structure formed in the sea, the third to eo floating mechanism. lady's veil marine fish the device such as the wind and a-waves and distortion and natural conditions, fixed to an outer surface of block assembly serves for in a selected block to an outer structure are in a line pipe for passing therethrough the n bit parallel data inputted integrating with balustrade safety same, a lower frame and human beings is sea activity of participants, and performing a simultaneous the upper space and to prevent a noise from the frame rigidity are taken in directly. Unit-derived materials are as weather radar are density buoy by selecting a specific excessive fabrication unit is formed reducing a ratio of a mold decoder to reduce been, all the n-type semiconductor layer production plant whee in a bolted assembly in field provided a processing solution is supplied through a simulation only process the site installation 2 marine difference generating vibration environmental pollution.</p>	KIM DO YOUNG	KR2020130002 194	2013/3/24
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213	<p style="text-align: center;">OTEC system adopted Direct Organic Driven Pump</p>	<p>The present invention relates to a thermal difference generation system using a pump which utilizes an organic in the organic rankine cycle as a direct driving source, as well as an economical and practical method thereof and a device thereof. A pump used in low-temperature thermal difference generation is rotated by driving an electric motor. These pumps account for most of the electricity used in the thermal difference generation. To improve the cycle efficiency, the electricity used by the pump is to be replaced by an organic direct driven pump. The working fluid discharged from the middle part or the back part will be released by a condenser. However, a turbine is installed instead of the traditional motor and rotates by using the remaining heat while the pump on the opposite side connected by a spindle will rotate to circulate the working fluid, a high thermal source, and a low thermal source. The organic direct driven pump-adopting thermal difference generation system according to an embodiment of the present invention has many advantages, such as reusing the working fluid by rotating the pump, improving the overall output and efficiency without using the electricity to power the pump, reducing the size of the condenser with the working fluid at a lower temperature, and reducing the generation unit price of the thermal difference generation. COPYRIGHT KIPO 2014</p>	<p style="text-align: center;">KIM YOU TAEK; CHA SANG WON</p>	<p style="text-align: center;">KR1020120133 478</p>	<p style="text-align: center;">2012/11/23</p>
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214	A METHOD AND SYSTEM FOR GENERATING POWER FROM A HEAT SOURCE	<p>A method of generating power from a heat source, said method including : compressing (10) a working fluid to increase its temperature; exchanging (11) heat between said working fluid and said heat source to superheat said working fluid; expanding (12) said superheated working fluid to drive a turbine, thereby reducing its temperature; condensing (13) said working fluid to further reduce its temperature : and returning said working fluid to said compressing step (10), the method further including the step (14) of regenerating the heat of said working fluid wherein working fluid passing between said compressing step (10) and said heat exchanging step (11) exchanges heat with working fluid passing between said expanding step (12) and said condensing step (13); wherein said steps are performed in a thermodynamic cycle (S1-S1'-S2-S3-S3'-S4) within a supercritical region (SC) above the saturation dome (A) of said working fluid, and wherein said heat regenerating step (14) is performed under isenthalpic conditions to induce continuous heat exchange. A system for generating power from a heat source is also provided.</p>	Newcastle Innovation Ltd	KR1020087030 287	2007/5/14
215	Electricity Generation System Using Ocean Thermal Energy Conversion And Heated Air From Wind Power Generator	<p>Disclosed is a power generation system using seawater temperature differences caused by heating air of a wind power generator. The power generation system using seawater temperature differences caused by heating air of a wind power generator includes : a heat exchanger for cooling the inside and gasifying a working fluid using heated air; a power generator unit for using the gasified working fluid to generate power; and a condenser for rotating the turbine of the power generator unit and heat-exchanging the working fluid with seawater.COPYRIGHT KIPO 2014</p>	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020120119 528	2012/10/26

216	Ocean thermal energy conversion using Perpetual salt spring principle	<p>PURPOSE : A cooling water supply ocean temperature difference energy conversion device is provided to efficiently cool working fluid used for an energy conversion device by easily pulling up sea water of lower temperature in a deep layer to a surface of the sea. CONSTITUTION : A cooling water supply ocean temperature difference energy conversion device comprises an energy conversion device(10), a working fluid discharge pipe(20), a circulation device unit, a cooling jacket unit(40), and an eruption spring tube curtain(50). The energy conversion device is installed to remain in the sea. The working fluid discharge pipe is installed in the underwater and discharges working fluid. The circulation device unit circulates the working fluid in the energy conversion device and the working fluid discharge pipe. The cooling jacket unit is installed in the underwater and cools the working fluid by raising the low temperature seawater of a deep layer. The eruption spring tube curtain is installed from the surface of the sea to the deep layer and repeatedly erupts the low temperature seawater to the surface of the sea due to temperature difference.</p>	KIM HOON CHUL	KR1020110107 374	2011/10/20
217	A private electric generator	<p>According to an embodiment of the present invention, provided is a private electric generator including : a first heat absorbing panel that absorbs heat corresponding to temperature; a second heat absorbing panel that absorbs heat corresponding to ground temperature or water temperature; and a thermoelectric generator that is disposed between the first and second heat absorbing panels and uses a temperature difference of the heat absorbed in the first heat absorbing panel and the second heat absorbing panel to generate power, thereby generating power based on a difference in temperature and ground temperature or water temperature according to a daily temperature range.[Reference numerals] (AA) Temperature; (BB) Soil temperature or water temperatureCOPYRIGHT KIPO 2014</p>	ELECTRONICS AND TELECOMMUNI CATIONS RESEARCH INSTITUTE	KR1020120110 588	2012/10/5

218	LOW DIFFERENTIAL TEMPERATURE ROTARY ENGINES	An engine is configured to generate power by extracting energy from a low temperature or pressure differential. A plurality of movable masses (e.g., fluid contained in and movable between vessels) is coupled to and arranged about a shaft. When subject to a pressure differential, mass moves to a higher vessel thereby increasing its potential energy and producing a gravitational moment that encourages rotation of the plurality of masses in the first direction. The pressure differential can be created by an increase in pressure that can be generated by exposing a substance (e.g., a volatile material) to heat.	DYVERGA ENERGY CORP	KR1020137033 345	2012/5/14
219	CARGO TANK USING STRAIGHT CORRUGATION MEMBRANE CONNECTION MEMBER FOR EXTREMELY LOW TEMPERATURE SUBSTANCE CARRIER	The present invention relates to a cargo hold of an extremely low temperature material cargo ship, which comprises : a hull shell which forms the exterior of a cargo hold; a membrane first protective wall which is in contact with an extremely low temperature material inside the cargo hold; a first insulating wall which is installed in the external side of the first protective wall; a membrane second protective wall which is installed in the external side of the first insulating wall; and a second insulating wall which is placed in the external side of the second protective wall in order to be fixated to the hull shell. The first protective wall comprises : a first corner corrugation panel in a corrugation shape where multiple corrugation sections are continuously formed in parallel; and a first main panel in a flat shape which is connected with the first corner corrugation panel. The second protective wall comprises : a second corner corrugation panel in a corrugation shape where multiple corrugation sections are continuously formed in parallel; and a second main panel in a flat shape which is connected with the second corner corrugation panel. According to an embodiment of the present invention, the cargo hold of an extremely low temperature material cargo ship allows a corrugation barrier to absorb shrinkage deformation due to the temperature of an extremely low temperature material by forming the first and second protective walls to include a corrugation panel having a corrugation unit where multiple corrugation sections are continuously formed in parallel, thereby preventing damage due to the shrinkage of the first and second protective walls. COPYRIGHT KIPO 2014	HYUNDAI HEAVY INDUSTRIES CO LTD	KR1020130165 964	2013/12/27

220	<p>CARGO TANK USING STRAIGHT CORRUGATION MEMBRANE CONNECTION MEMBER FOR EXTREMELY LOW TEMPERATURE SUBSTANCE CARRIER</p>	<p>The present invention relates to a cargo hold of an extremely low temperature material cargo ship, which comprises : a hull shell which forms the exterior of a cargo hold; a membrane first protective wall which is in contact with an extremely low temperature material inside the cargo hold; a first insulating wall which is installed in the external side of the first protective wall; a membrane second protective wall which is installed in the external side of the first insulating wall; and a second insulating wall which is placed in the external side of the second protective wall in order to be fixated to the hull shell. At least one between the first insulating wall and the second insulating wall comprises : a plastic stiffener which is formed of multiple plastic thin plates; and an insulating board which is formed of an insulator filled in the inside of a grid of the plastic stiffener. According to an embodiment of the present invention, the cargo hold of an extremely low temperature material cargo ship is formed in a special structure where a polyurethane form insulator is reinforced with the plastic stiffener for the insulating wall in order to use polyurethane form with relatively low density compared to a case where the insulator is not reinforced with the plastic stiffener. Therefore, the cargo hold prepared by the present invention can reduce raw material costs for polyurethane form consumed, secure excellent insulation capacity and compressive strength, and reduce the thickness of polyurethane form. COPYRIGHT KIPO 2014</p>	<p>HYUNDAI HEAVY INDUSTRIES CO LTD</p>	<p>KR1020130165 980</p>	<p>2013/12/27</p>
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221	CARGO TANK USING STRAIGHT CORRUGATION MEMBRANE CONNECTION MEMBER FOR EXTREMELY LOW TEMPERATURE SUBSTANCE CARRIER	<p>The present invention relates to a cargo hold of an extremely low temperature material cargo ship, which comprises : a hull shell which forms the exterior of a cargo hold; a membrane first protective wall which is in contact with an extremely low temperature material inside the cargo hold; a first insulating wall which is installed in the external side of the first protective wall; a membrane second protective wall which is installed in the external side of the first insulating wall; and a second insulating wall which is placed in the external side of the second protective wall in order to be fixated to the hull shell. At least part of the second protective wall is formed of a metal material. The second insulating wall includes a polyurethane form insulator, and upper plywood which is formed on the top surface of the polyurethane form insulator. The second protective wall is characterized by being combined with the second insulating wall through a combining unit connected with the upper plywood. According to an embodiment of the present invention, the cargo hold of an extremely low temperature material cargo ship can secure sufficient connection force between the second insulating wall and the second protective wall by forming the second protective wall of a stainless material and by combining the second protective wall with the upper plywood of the second insulating wall through the installation of the upper plywood on the second insulating wall in order to fixate the second protective wall.</p> <p>COPYRIGHT KIPO 2014</p>	HYUNDAI HEAVY INDUSTRIES CO LTD	KR1020130166896	2013/12/30
222	Multi-Turbine Power plant system by using ocean thermal energy conversion (OTEC)	<p>The present invention relates to a multi-turbine power plant system for surface water and deep water energy sources using ocean temperature difference. The system includes a first turbine, a second turbine, a regenerator for allowing low temperature refrigerants to exchange heat with each other, deep water supplied as the heat source of a condenser, and surface water supplied as the heat source of an evaporator.</p> <p>[Reference numerals] (80) Deep water; (90) Surface water</p>	KOREA INST OCEAN SCI TECH	KR1020120115577	2012/10/17

223	Pin jig for height adjustment of the hydraulic jig	<p>The present invention relates to a hydraulic fixture for adjusting the height of a pin jig which supports a block and, more specifically, to a hydraulic fixture for adjusting the height of a pin jig, comprising : a housing which has a holding groove, which holds the upper end of the pin jig, on the front thereof to form a Ω-shape so as to be mounted on the upper end of the pin jig which supports the block; a pair of hydraulic cylinders which is provided at the right and left sides of the housing, respectively, and releases oil pressure to lift up rams which support the block, adjusting the height level of the block; and a Ω-shaped holding plate which is coupled to the upper surface of the housing to be put on the upper end of the pin jig. The hydraulic fixture for adjusting the height of a pin jig is mounted to the upper end of a conventional pin jig to apply oil pressure to a hydraulic system additionally mounted. Then, the pair of hydraulic cylinders adjusts the height level of the block with the applied oil pressure to form space between the fine adjustment bolt head of the pin jig and the block. Thus, the hydraulic fixture facilitates the operation of a fine adjustment bolt to enable the worker to conveniently complete the control of the fine adjustment bolt, thereby improving productivity. A conventionally used pin jig can be applied to the hydraulic fixture without any need to improve the pin jig to reduce manufacturing costs, facilitate maintenance and management, and secure compatibility of being used even in a curved block. The housing is formed in a Ω shape and mounted to hold the upper part of the pin jig and a lock member is fastened to the housing to prevent the housing from being easily separated from the pin jig even though an excessive load is applied to the device, resulting in ensuring the safety of the worker</p>	HYUNDAI MIPO DOCKYARD CO LTD	KR1020120058437	2012/5/31
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224	Ship For Removing Red Tide Equipped Solar Heating Device	A vessel for removing red tide in which solar heating device is installed is disclosed. The vessel for removing the red tide comprises : a solar heat red tide purifying unit for generating high temperature water by pressurizing seawater and being heated with solar heat and purifying/sterilizing the high temperature water by pumping red tide seawater in a sea area in which the red tide is generated; and a seawater temperature difference generation unit for generating power by using the temperature difference of the red tide seawater heated as the high temperature water is inputted and deep sea water.[Reference numerals] (AA) Power supply; (BB) Deep waterCOPYRIGHT KIPO 2014	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020120054 181	2012/5/22
225	Electricity Generation System Of Ocean Thermal Energy Conversion Using Waste-Heat In Cooling Water Of Condenser And Solar Energy	An ocean thermal energy conversion system using solar heat and remaining heat of discharged water from a condenser is disclosed. The ocean thermal energy conversion system using solar heat and remaining heat of discharged water from the condenser comprises a solar heat storage unit which generates superheated fluid by pressurizing and heating the fluid with the solar heat; and a generation unit which generates steam by vaporizing a refrigerant using hot water being discharged from the condenser of other power generation systems including thermal or nuclear power generation and which generates power by heat-exchanging the steam with the superheated fluid.[Reference numerals] (AA, DD) Electric power transmission; (BB) Seawater suction; (CC) Seawater dischargeCOPYRIGHT KIPO 2014	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020120058 077	2012/5/31
226	Electricity Generation System Of Ocean Thermal Energy Conversion Using Cooling Water Of Condenser And Solar Energy	A power generation system by ocean temperature difference using solar heat and discharged water from a condenser is disclosed. The power generation system by ocean temperature difference using solar heat and discharged water from the condenser comprises : a solar heat storage unit which generates heated fluid by pressurizing and heating the fluid with the solar heat; and a desalinization unit for power generation which generates power by steam generated from heat exchanging with the heated fluid by vaporizing seawater discharged from the condenser of another power generation system in an offshore facility having thermal or nuclear energy and which generates fresh water by heat-exchanging the discharged steam with deep water.[Reference numerals] (AA) Power; (BB) Deep waterCOPYRIGHT KIPO 2014	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020120058 078	2012/5/31

227	Electricity Generation System Using Ocean Thermal Energy Conversion And Solar Energy	<p>An ocean thermal energy conversion system is disclosed. The ocean thermal energy conversion system using sunlight of the present invention includes a sunlight storage unit forming an overheated fluid by pressing the fluid and heating the same with the sunlight and a generation unit. The generation unit receives seawater, which is discharged from a condenser of the other generation system such as thermal power generation and nuclear power generation, as supply water and evaporates the same. The generation unit generates electricity with vapor generated due to heat exchange with the overheated fluid and generates fresh water by exchanging the heat of the discharged vapor with the heat of deep water.[Reference numerals] (AA) Deep water</p>	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020120047518	2012/5/4
228	Electricity Generation System Using Ocean Thermal Energy Conversion	<p>PURPOSE : A power generation system using ocean thermal energy conversion is provided to increase power generation efficiency without a facility using electricity, fossil fuel, and others as an energy source and to be environmentally friendly and economically operated only using solar heat.CONSTITUTION : A power generation system using ocean thermal energy conversion comprises a solar heat storage part (100) and a power generation part (200). The solar heat storage part compresses fluid and heats the fluid with solar heat to form the overheated fluid. The power generation part generates electricity by the ocean thermal energy conversion operated by heat-exchanging the overheated fluid with surface water and deep water.[Reference numerals] (AA) Fresh water</p>	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020120041877	2012/4/23

229	OCEAN STRUCTURE FOR WASTE DISPOSAL	<p>PURPOSE : An offshore structure generated by incinerating wastes is provided to prevent air pollution due to harmful gas generated when wastes are incinerated, by discharging the harmful gas to the seabed.</p> <p>CONSTITUTION : An offshore structure(100) generated by incinerating wastes comprises a body(110), a waste transshipment part, a waste incineration part(130), a harmful gas storing part, and a harmful gas discharging part(150). The body is installed in the sea(S). The waste transshipment part is formed in the upper part of the body, and transships wastes. The waste incineration part incinerates the wastes moved from the waste transshipment part. The harmful gas storage part is installed in the body, and stores the harmful gas generated when the wastes are incinerated in the waste incineration part. The harmful gas discharging part discharges the harmful gas stored in the harmful gas storage part to the seabed.</p>	SAMSUNG HEAVY IND CO LTD	KR1020110086 802	2011/8/30
230	INSULATION BOX FIXING STRUCTURE FOR CARGO CONTAINMENT	<p>PURPOSE : An insulation box fixing structure for a cargo hold is provided to improve the strength, stability, and insulation performance of an insulation box by absorbing sloshing impact transferred to a secondary insulation box with a simple structure.</p> <p>CONSTITUTION : An insulation box fixing structure for a cargo hold comprises a primary insulation box(10), a secondary insulation box(20), and a fixing unit(30). The primary insulation box primarily insulates liquefied natural gas stored in a storage tank. The secondary insulation box is arranged between the primary insulation box and the inner wall of a hull to secondarily insulate the liquefied natural gas. The fixing unit fixes the primary insulation box on the secondary insulation box. The fixing unit comprises an impact absorbing member which is arranged in a section where the primary and secondary insulation boxes are connected to absorb the sloshing impact of the storage tank.</p>	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020110110 080	2011/10/26

231	Floating apparatus for generating electricity with thermoelectric element	<p>PURPOSE : A floating apparatus for generating electricity is provided to float on water, thereby largely maintaining temperature variation in a thermoelectric element module using solar heat and water heat.</p> <p>CONSTITUTION : A floating apparatus for generating electricity includes a casing(110), a heat collecting lens(120), a thermoelectric element module(130), a supporting part(140), and a weight(150). The upper side of the casing is opened and an empty space is formed inside the casing so that the casing floats on the water. A heat collecting panel, which is formed with glass, is installed at the upper side of the thermoelectric element module on the lower side of the casing. A spherical joint groove(141) is formed at the lower side of the supporting part at the lower side of the casing. A ball joint(151) at the top of the weight is coupled to the joint groove.</p>	BRICON CO LTD	KR1020110124 162	2011/11/25
232	Mixed refrigerant	<p>PURPOSE : An R32/R290 mixed coolant is provided to replace R410A and monochloro fluoro methane, and to have an ODP(Ozone Depletion Potential) of 0.0 and a low global warming potential.CONSTITUTION : An R32/R290 mixed coolant comprises 55-80% of R32(methylene fluoride; CH₂F₂) and 20-45% of R290(propane; CH₃CH₂CH₃). The ozone depletion potential of the coolant is 0 and the GWP(Global Warming Potential) is 20.84-27.7% of R410A. The VC(Volumetric Capacity) of the coolant is 12.8-16.7% of the R410A. The coolant does not show a temperature gradient as a pure material does.COPYRIGHT KIPO 2013</p>	KOREA INSTITUTE OF OCEAN SCIENCE TECHNOLOGY	KR1020110093 617	2011/9/16
233	MULTIPLE INSULATION BOX FOR A LNG STORAGE TANK AND ITS MANUFACTURING METHOD	<p>PURPOSE : An insulation box for a hold of an LNG vessel and a manufacturing method thereof are provided to improve the intensity and the performance of insulation and to simplify the manufacturing work of the insulation box.CONSTITUTION : An insulation box (1) for a hold of an LNG vessel comprises a storage tank, a first insulation box (110), a second insulation box (120), and coupling members (130). The storage tank stores LNG therein. The first and second insulation boxes are successively formed between the inner walls of a hull and have a multi-layer structure. The coupling members are supported to coupling areas and couple the insulation boxes to each other.COPYRIGHT KIPO 2013</p>	DAEWOO SHIPBUILDING MARINE ENGINEERING CO LTD	KR1020110143 564	2011/12/27

234	INDUSTRIAL OCEAN THERMAL ENERGY CONVERSION PROCESSES	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.	ABELL FOUNDATION INC	KR1020137003 794	2011/7/14
235	A WAVE POWER APPARATUS COMPRISING A PLURALITY OF ARMS ARRANGED TO PIVOT WITH A MUTUAL PHASE SHIFT	A wave power apparatus includes a plurality of rotationally supported arms, each of which carries a float (124) at its free end, so that a translational movement of the float caused by a wave results in rotation of the arm. The apparatus comprises power conversion means for converting power transmitted from the wave to the arms into electric power, e.g. a hydraulic system, in which a hydraulic fluid is displaced by the movement of the arms to drive one or more hydraulic motors. The plurality of arms are arranged in a row such that a wave passing the row of arms causes the arms to successively pivot with a mutual phase shift. Thereby, an even power output may be achieved, and the need for frequency converters may be reduced or eliminated. Preferably, each arm is connected to a hydraulic cylinder of the hydraulic system, whereby a plurality of arms feed hydraulic medium into the hydraulic motor or motors through common hydraulic conduits.	WAVE STAR ENERGY A/S	KR1020067009 453	2004/10/14
236	ELECTRIC POWER GENERATION SYSTEM USING FLUID CIRCULATION	PURPOSE : A power generating system using the self-circulating of fluid is provided to improve generating efficiency using a rotary engine with minimized mechanical losses. CONSTITUTION : A power generating system using the self-circulating of fluid comprises a fluid container(10), an electrical energy generating unit(20), a condenser(30), a gas-liquid separator(40), and a receiver tank(50). The electric energy generating unit comprises a rotary valve, a rotary engine, and generating unit. The condenser cools the fluid discharged from the electrical energy generating unit. The gas-liquid separator collects liquids and gas discharged from the condenser, and discharges only the liquids. The receiver tank collects the liquids discharged from the gas-liquid separator.	BIP INDUSTRIES CO LTD	KR1020110020 162	2011/3/8

237	High efficiency differential temperature power system using the thermal effluents of power plant condenser	<p>PURPOSE : A power generation system with high temperature difference using hot water from a condenser of a power plant is provided to prevent environmental pollution caused by the discharging of drained hot water into the sea as a coolant circulates along a closed loop between refrigerant evaporators. CONSTITUTION : A power generation system with high temperature difference using hot water(24) from a condenser of a power plant comprises a power generation system using offshore temperature difference. The power generation system operates a turbine by superheated steam generated from a boiler(21) to produce electricity using a power generator(23) connected to the turbine(22). The power generation system circulates a coolant into the boiler after super-cooling the steam with the coolant. The power generation system using the offshore temperature difference generates the electricity from a refrigerant power generator connected to a refrigerant turbine by operating the refrigerant turbine(30). The power generation system using the offshore temperature difference circulates deep sea water into a refrigerant evaporator after super-cooling refrigerant steam with the deep sea water in a refrigerant condenser(32). [Reference numerals] (AA)</p> <p>Supplementary water supply</p>	JEJU NATIONAL UNIVERSITY INDUSTRY ACADEMIC COOPERATION FOUNDATION	KR1020110061731	2011/6/24
238	a vessel	<p>PURPOSE : A robot ship using wave power is provided to store electric energy generated by the wave motion at a rear hull and photovoltaic arrays and to use the electric energy as a propelling force, thereby reducing thermal power energy.</p> <p>CONSTITUTION : A robot ship using wave power comprises a front hull(110), a rear hull(120), a hinge rotary shaft(130), a ring gear(140), a small driven gear(150), a DC generator(160), a storage battery(170), a DC motor, and photovoltaic arrays(210). The storage battery stores electric energy generating in the DC generator. The DC motor receives electricity from the storage battery to drive a rudder and a propeller(180) installed in a ship. The photovoltaic arrays are formed on the top of the front hull and the rear hull to convert the solar energy to the electric energy. A DC generator using fossil fuel is connected to the storage battery for auxiliary generation.</p> <p>COPYRIGHT KIPO 2012</p>	KIM DONG JUN; KIM DONG HA	KR1020110062913	2011/6/28

239	OFFSHORE FLOATING OCEAN ENERGY SYSTEM	Embodiments of the present disclosure relate to the general art of energy storage and power generation, and in particular to systems for capturing and storing energy, for instance, offshore floating ocean energy systems. In various embodiments, such systems may include a pneumatically stabilized platform base coupled to a power generator and a potential energy storage device.	FLOAT INC	KR1020117024 789	2010/3/19
240	apparatus for ocean thermal energy conversion of vessel	PURPOSE : A power generating device using temperature difference of seawater for a ship is provided to enhance the energy efficiency of a ship by producing separate power by additionally installing an auxiliary generator on the generator of the ship.CONSTITUTION : A power generating device using temperature difference of seawater for a ship comprises a seawater sucking pump(220), an evaporator(420), a generator(431), a condenser(440), a drain tank(450) and a working-fluid circulating pump(460). The seawater sucking pump sucks seawater from the sea to cool the power source of the ship. The evaporator exchanges heat with seawater heated by the power source and evaporates the working fluid circulating a working-fluid circulating pipe. The generator rotates a turbine with the pressure of the evaporated working fluid to generate electric energy.COPYRIGHT KIPO 2011	KOREA MARITIME UNIVERSITY INDUSTRY ACADEMIC COOPERATION FOUNDATION	KR1020100001 607	2010/1/8
241	OCEAN-GOING VESSEL HAVING AT LEAST ONE REFRIGERATING MACHINE	PURPOSE : An ocean-going vessel having at least one refrigerating machine is provided to run a ship at a low cost using waste heat from a power supply source for a ship propelling system optimally. CONSTITUTION : An ocean-going vessel comprises at least one refrigerating machine, at least one facility using waste heat, and a power supply source(3). The power supply source is used for a ship propelling system. The refrigerating machine is an absorption refrigerating machine(1), the power supply source is connected to the absorption refrigerating machine on waste heat side, the absorption refrigerating machine comprises a waste heat line on waste heat side, and the waste heat line is connected to the facility using waste heat. COPYRIGHT KIPO 2012	MEYER WERFT GMBH	KR1020110068 918	2011/7/12

242	POWER PLANT SYSTEM OF OCEAN THERMAL ENERGY CONVERSION WITH REHEATING PROCESS	<p>PURPOSE : An ocean thermal energy conversion system having a reheating process is provided to improve generation efficiency by reducing the heat quantity of a vaporizer through a reheating process.</p> <p>CONSTITUTION : An ocean thermal energy conversion system having a reheating process is composed as follows. Working fluid, converted into steam in a vaporizer(1), is supplied to a heat exchanger(2) and is heat-exchanged with unused energy. The heat-exchanged working fluid is supplied to a distributor(3), and a part of the working fluid is bypassed. The bypassed working fluid is supplied to a re-heater(4). The other part of the working fluid is supplied to a turbine(5) and powers the turbine. The working fluid passing through the turbine is liquefied in a condenser(6) in which ocean deep water is supplied. The liquefied working fluid is supplied to the re-heater through a working fluid supply pump(7) and is heat-exchanged with the bypassed working fluid. The heat-exchanged working fluid is circulated through a working fluid circulation pump(8).</p> <p>COPYRIGHT KIPO 2012</p>	KOREA OCEAN RESEARCH AND DEVELOPMENT INSTITUTE	KR1020100034 546	2010/4/15
243	COOLING APPLICATION SYSTEM FOR POWER PLANT AND OCEAN THERMAL ENERGY CONVERSION USING DEEP SEA WATER	<p>PURPOSE : An ocean thermal energy conversion system using deep ocean water and cooling water is provided to improve generation efficiency by simultaneously using cold water, hot water, and cooling water.</p> <p>CONSTITUTION : An ocean thermal energy conversion system using deep ocean water and cooling water comprises a working fluid line(1), a cooling water supply line(2), and a hot water supply line(3). The working fluid line circulates working fluid and comprises a vaporizer(11), a turbine(12), a condenser(13), and a circulation pump(14). The cooling water supply line uses deep ocean water collected through an intake pipe(4) having a pump(41) as cooling water and supplies the water to a cooling device(5). The hot water supply line is connected to the cooling water supply line and uses the water exhausted from the cooling device as a vaporization heat supply source of the vaporizer.</p> <p>COPYRIGHT KIPO 2012</p>	KOREA OCEAN RESEARCH AND DEVELOPMENT INSTITUTE	KR1020100034 477	2010/4/14

244	GRAVEL BED EQUIPMENT	<p>PURPOSE : A placing aggregate in ocean floor, capable of uniform and minute construction without the loss of aggregate, is provided to increase efficiency according to installation tasks and to minimize the loss of aggregate. CONSTITUTION : A placing aggregate in ocean floor comprises a first frame(310), a second frame(320), a base member(330), a tremie pipe(360), drive materials(340, 350), a micro control member(370) and a controller. The second frame is installed to be crossed in the first frame and moves according to the first frame. The base member is installed in the second frame and moves according to the second frame. The tremie pipe is installed in the base member. The drive material drives so that the base member can be carried according to the first and second frame.</p>	<p>DAEWOO ENGINEERING CONSTRUCTION CO LTD; Silver five NCsoft Corporation</p>	<p>KR1020090030920</p>	<p>2009/4/9</p>
245	Air conditon apparatus for ship	<p>PURPOSE : An air conditioning system for a ship is provided to raise energy usage efficiency by recycling energy by making the inside warm or cool using the waste heat radiated from an engine room. CONSTITUTION : An air conditioning system for a ship comprises a heating pump(20), a heat exchanger(30), a cooler(50) and an air conditioner(60). The heating pump produces hot water using the waste heat of an engine room(10). The heat exchanger raises the temperature of the hot water. The cooler absorbs heat through the phase change of a refrigerant using the hot water supplied from the heat exchanger. The air conditioner controls the indoor temperature through the heat exchange between the refrigerant of the cooler and the indoor air.</p>	<p>SAMSUNG HEAVY IND CO LTD; SAMSUNG HEAVY IND COLTD</p>	<p>KR1020080106449</p>	<p>2008/10/29</p>

246	OCEAN THERMAL ENERGY CONVERSION SYSTEM OF MULTISTAGE CYCLE TYPE USING SURFACE WATER OR DISCHARGE WATER OF POWER PLANT AND DEEP SEA WATER	<p>PURPOSE : A multistage cycle type generation system by a sea temperature difference using deep seawater, water discharged from a power plant or surface water is provided to reduce cooling water required for generation.</p> <p>CONSTITUTION : A multistage cycle type generation system by a sea temperature difference using deep seawater, water discharged from a power plant or surface water comprises a carburetter(1), a turbine(2), a condenser(3), and a pump(4). Water discharged from a power plant or surface water is supplied to the carburetter. The turbine converts working fluid into vapor and is powered by the converted vapor. The condenser liquefies the steam discharged from the turbine using deep seawater. The pump circulates a generation cycle(10).</p> <p>COPYRIGHT KIPO 2012</p>	KOREA OCEAN RESEARCH AND DEVELOPMENT INSTITUTE	KR1020100020987	2010/3/9
247	Superheated Steam Generator, Power Generation Ship, and Connecting Robot	<p>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.</p>	Okawa dokioh	KR1020107028727	2009/10/14

248	apparatus for ocean thermal power generation	<p>PURPOSE : A device for ocean thermal energy conversion is provided to improve generation efficiency using thermal effluent as a heating source.CONSTITUTION : A device for ocean thermal energy conversion comprises an evaporator(120), a generator(140), a condenser(150), and a refrigerant circulation pump(160). The evaporator evaporates liquefied refrigerants by heat-exchanging with thermal effluent. The generator generates electric energy by rotating a turbine using the pressure of the evaporated refrigerants. The condenser liquefies the evaporated refrigerants by heat-exchanging with seawater. The refrigerant circulation pump circulates the refrigerants inside a refrigerant circulation tube.COPYRIGHT KIPO 2011</p>	KOREA MARITIME UNIVERSITY INDUSTRY ACADEMIC COOPERATION FOUNDATION	KR1020090118359	2009/12/2
249	HYBRID OCEAN THERMAL ENERGY CONVERSION SYSTEM USING WASTE HEAT OF COMPUTER SERVER	<p>PURPOSE : A seawater temperature difference power generating system using waste heat of a computer server is provided to produce electricity using temperature difference between deep sea water and surface sea water.CONSTITUTION : A seawater temperature difference power generating system using waste heat of a computer server comprises a water-cooling computer server(110), a pump unit(122), an electronic generate unit, and a seawater temperature difference generator(120). The water-cooling computer server comprises a heat exchanger(112). The heat exchanger raises the temperature of the surface sea water and lowers the temperature of the computer server. The pump unit pumps the surface sea water and the deep sea water. The electronic generate unit produces electricity using the temperature difference between the deep sea water and the surface sea water. The seawater temperature difference generator comprises a discharge unit.COPYRIGHT KIPO 2011</p>	KIM NUNG SOO; LEE JAE YOUNG; SONG YONG JAE	KR1020090095092	2009/10/7

250	The sea scrap recycling and electric power supplying ship for island community by collecting and treatment on the sea	<p>PURPOSE : An ocean garbage recycling ship equipped with an environmentally-friendly treatment device and a ship load control device are provided to collect ocean garbage and produce energy through incineration of the ocean garbage.CONSTITUTION : An ocean garbage recycling ship comprises a first ballast(161), a second ballast(162), a first control device(163), a third ballast(164), and a second control device(165). The first ballast is located under a raw material storage tank in the lower part of the ship and stores the seawater. The second ballast is located under an ash storage tank in the lower part of the ship and stores the seawater. The first control device controls the flow of seawater between the first and second ballasts. The third ballast takes in the seawater as much as the amount of a raw material reduced by incineration. The second control device controls the inflow and outflow of seawater in the third ballast.COPYRIGHT KIPO 2011</p>	HALLA ENGINEERING INDUSTRIAL DEVELOPMENT CO LTD	KR1020100085 381	2010/9/1
251	The sea scrap recycling and electric power supplying ship for island community by collecting and treatment on the sea	<p>PURPOSE : An ocean garbage recycling ship is provided to prevent environmental contamination caused by transport of sea scrap and produce electric energy from ocean garbage.CONSTITUTION : An ocean garbage recycling ship comprises a collecting apparatus(10), a first bunker(20), a crusher(30), a selecting apparatus(40), a reservoir(50), a dryer(60), a second bunker(70), a first crane(80), an incinerator(90), a boiler(100), an ash treatment apparatus apparatus(110), a generator(120), a power transmission apparatus(130), and an auxiliary power unit(140). The collecting apparatus collects ocean garbage into the ship. The first bunker eliminates the seawater and foreign materials included in ocean garbage first. The crusher crushes the ocean garbage collected in the first bunker. The selecting apparatus sorts the crushed ocean garbage. The reservoir stores the selected materials. The second bunker stores the materials dried through the dryer. The first crane puts the materials collected in the second bunker into the incinerator.COPYRIGHT KIPO 2011</p>	HALLA ENGINEERING INDUSTRIAL DEVELOPMENT CO LTD	KR1020100085 380	2010/9/1

252	A Marker Buoy Unit for Safety of a Disaster at Sea	<p>Hardly water-safety buoy device in the device, in particular sea or steel a hardly water-safety buoy and simple in production high speed a bottom of easy plate and the rods, securing visibility nighttime also float can be characterized by a to provide of emulsifying the hardly water-safety buoy device relates to,</p> <p>Inside synthetic resin forming space section is conical in shape when out is prepared on the upper surface of conical-type case and which extend; said conical case provided on the inner side of the to, the top air is filled, water lower that the center-of-gravity are filled is directed into lower surface with a conical shape in the form roly-poly case can flow a inner partition and; putty bottom of said conical case sense and expressing marine is provided a rack for constitution : heat of a body to raw viscosity incorporatign primary partial coupling; said conical case of side surface raw viscosity incorporatign primary partial coupling hanger surface side individually; said hanger in a fiber channel disk side surface next to an end of a side handle and for fire escapes temporary with tape for; tensely from the outer circumference of said conical arrangement to, when the light emitting part outside the be same include a phase change media having night glow tape type. of each of the link units.</p>	Corporation Korea Maritime nine trillion	KR2020080000 550	2008/1/14
253	For the ocean a generating plant in global village zero calmity tidal power generator used with in it' s a level pipes seesow type	<p>PURPOSE : A wind-water generator with a seesaw-type pipe level for a non-disaster global marine generating station is provided to produce electricity using a plurality of generators capable of various types of power generation.CONSTITUTION : A wind-water generator with a seesaw-type pipe level for a non-disaster global marine generating station comprises a plurality of marine generating station units in which a plurality of generators are installed on the deck of a barge(591) above tanks(590). A barge(592) under the tanks is connected to floating docks. The generators are capable of thermal power generation, hydroelectric power generation, geothermal power generation, nuclear power generation, solar power generation, tidal power generation, or space power generation. The electricity produced by the generators is delivered to electric power substations.COPYRIGHT KIPO 2010</p>	LEE WOO SUNG	KR1020090117 757	2009/11/30

254	Installation method of the secondary insulation panel for LNG carrier	<p>The present invention refers to liquid natural gas carrier method relates to for installing the same and of the insulation system in, the 2 difference insulation plate 2 are disposed at the connecting hole, the support is combined center insulation difference that an equal length and plate fastening bolting and second pressure, the length and the of easily controlling a flatness in the direction of the width 2 and increasing the degree fastening plate insulation difference, connecting hole, the support is combined through the reduction of information on the connection component and the can and quilting functions capable of working continuously and of the insulation system in liquid natural gas carrier by a rope. provides method for installing the same.</p> <p>The present invention refers to 2 the central insulation difference secured to a hole are disposed at the a part of the hull plate insulation difference 2, support plate and a horizontal support plate plate insulation difference 2 2 1 a disposed on top of an insulating boards difference insulating boards difference to arranged as staggered edge adhesive provided.</p>	HYUNDAI HEAVY INDUSTRIES CO LTD	KR1020070112 826	2007/11/6
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255	TEMPERATURE CONTROL SYSTEM OF DISCHARGE WATER AND REUSE COOLING WATER OF POWER PLANT USING DEEP SEA WATER	<p>PURPOSE : A system for cooling water reuse and discharge water temperature control of a power plant using deep sea water is provided to stabilize water temperature of the sea area by collecting deep sea water and mixing it with discharged water. CONSTITUTION : A system for cooling water reuse and discharge water temperature control of a power plant using deep sea water comprises an automatic water temperature measuring device, a deep sea water intake device, a thermal difference generation device, and a mixing-adjusting device. The automatic water temperature measuring device measures the temperatures of sea water and discharged water in real time, and automatically calculates intake requirement of deep sea water. The deep sea water intake device receives data measured by the automatic water temperature measuring device. The deep sea water intake device collects deep sea water as much as the determined intake requirement. The thermal difference generation device lowers the temperature of the deep sea water which passes through the deep sea water intake device. The mixing-adjusting device mixes the discharged water and the deep sea water which having passed through the thermal difference generation device, and discharges the mixed water with the temperature near the sea water temperature.</p>	OCIAD CO LTD	KR1020090053 682	2009/6/17
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256	FENDER FOR A SHIP	<p>In ocular to harbour as a ship the device phase change media having altered resistivity where athletes for alleviating a player of the ship and to form a marine oil-is attached to one side in the fenders, is formed into the grooves of the front is streamlined face player source projects a light formed between the inner case and the is is closely attached to a lower, inner and the irregular surface said extends upper curved direction normal toward an deck such that the upper surface is the same shape as a constant depth in a gypsum board liner to deck mating face fixed room present time and long as the bow, said player room present time stern at both sides are bolted to a side of ship until outer end of the elastic body is having air pump servo valve during the ring groove a so that they do not protrude at room present time side consists of a recess formed on the plurality of bolts.</p> <p>Thus in the device by it measures antiglare for ships of ship player that are stacked and as to be protruded to the side by side/player room present time , ship and harbour a the separate facilities in rim of the base plate is/to close a compressed gas vent without occupant falling front of the n bit parallel data inputted, is are ocular hit on or harbour of hovercraft ship from collision with other ship for protecting, intermittently power of a handphone mirror/group conveyance without breakage of the ship and to mounted object intermittently enabling thing of ship.</p>	VOGO CO LTD	KR2020070017 039	2007/10/22
257	OSMOTIC HEAT ENGINE	<p>A method of converting thermal energy into mechanical work that uses a semi-permeable membrane to convert osmotic pressure into electrical power. A closed cycle pressure-retarded osmosis (PRO) process known as an osmotic heat engine (OHE) uses a concentrated ammonia-carbon dioxide draw solution to create high osmotic pressures which generate water flux through a semi-permeable membrane against a hydraulic pressure gradient. The depressurization of the increased draw solution volume in a turbine produces electrical power. The process is maintained in steady state operation through the separation of the diluted draw solution into a re-concentrated draw solution and deionized water working fluid, both for reuse in the osmotic heat engine.© KIPO & WIPO 2009</p>	YALE UNIVERSITY	KR1020097011 700	2007/11/8

258	<p>In an Ocean Thermal Energy Conversion System, a method and an apparatus of collecting deep and surface sea water into the heat exchange chamber by the force of gravity without using pump.</p>	<p>PURPOSE : A method and an apparatus for collecting deep sea water and surface sea water into a heat exchange chamber by the gravity in an OTEC(Ocean Thermal Energy Conversion) system are provided to improve the power generation efficiency and cut down on the cost of OTEC plants.CONSTITUTION : An apparatus for collecting deep sea water and surface sea water into a heat exchange chamber by the gravity in an OTEC system comprises a heat exchange chamber installed in the power generation facility and a cold water chamber(16) installed inside the heat exchange chamber below the seawater surface(13). Cold water(19) of deep sea is supplied to the cold water chamber by the gravity and then supplied to the heat exchange chamber and heat-exchanged with seawater(20) of relatively high temperature.© KIPO 2009</p>	<p>CHUN JOO HAN</p>	<p>KR1020090004 603</p>	<p>2009/1/20</p>
259	<p>Cover for Hole in Sea Chest of Ship</p>	<p>The present invention refers to ship includes the follow elements for flowed into sea structure for setting control sensor of the ship and to positive closure of the housing is connected to the pump suction, a suction opening is provided to cover, more specifically of ship positive closure of the housing is connected to the pump suction in intake cover, said pump suction port of the pump housing so that a wafer of ship said ship relatively with respect to the inlet which of area greater higher than a transition temperature of, internal buoyancy force on by water pressure space to prevent the shape deformation plate layer a multiple structure, said plate can be fixed to hull layer said plate layer through the epitaxial channel adjustment layer fixed support to an intake port of said hull and wearing article has fastening means, for said plate layer is adhered on the hull to the hull plate layer, which is interposed between the specially configured include a phase change media having characterized by relates to cover intake tool for ship.</p>	<p>DOO YANG CO LTD</p>	<p>KR1020040059 351</p>	<p>2004/7/28</p>

260	Cover for Hole in Sea Chest of Ship	<p>Sea structure for setting control sensor includes the follow elements ship the device is located for positive closure of the housing is connected to the pump suction of the ship and to is provided to cover, a suction opening, more specifically of ship positive closure of the housing is connected to the pump suction in intake cover, said pump suction port of the pump housing so that a wafer of ship said ship relatively with respect to the inlet which of area greater higher than a transition temperature of, internal buoyancy force on by water pressure space to prevent the shape deformation plate layer a multiple structure, said plate can be fixed to hull layer said plate layer through the epitaxial channel adjustment layer fixed support to an intake port of said hull and wearing article has fastening means, for said plate layer is adhered on the hull to the hull plate layer, which is interposed between the specially configured include a phase change media having characterized by relates to cover intake tool for ship.</p>	KIM YONG YULL	KR2020040021 588	2004/7/28
261	Implement for aquatic leisure	<p>At the distal end portion of the plurality of frames are stored which are disclosure a furnace each-actuating rod the each coupled to float-actuating rod by user's hands and then collected-held so as to produce a thrust by the exercise by the consumer simultaneously, a magnetic holder relates to. Such the device into the disc is floating in water connector is formed by the user is mounted on a propelling the, air tube or buoyant member which is, central through hole is formed and float; freeze of through hole inside consent have the rest two actuation 2 that are joined each other, and which are individually fastened to outer ends rod is actuated and the second pipes for a propulsion force is provided on into the furnace two 2, uses both hands in holding and-actuating rod phase change while pinched body almost stuck in alternating layers to pulled away and while the user's body the inner peripheral surface to suspend in water the float by user while the enclosed state is maintained and of boiler-deoxy--stirring operation since from being generated thrust by the mobile phone is identified with an fun the decoration plate further comprises an enhancing physical strength with which performed, a very simply designed mechanism implementing the same and the other to thereby cause cost increase the recording operation..</p>	Hwangjinyong	KR2020040006 679	2004/3/11

262	DEMAGNETIZATION-PROTECTED PERMANENT MAGNET SHIP PROPULSION SYSTEM	<p>The invention relates to an electric drive system for high levels of output, for example for outputs exceeding 500 kW, that is highly available and long-lasting and that is especially used for seagoing ships. The inventive drive system comprises an electromotor that is driven by a permanent magnet and that is provided with at least one consumer of a rotational energy, especially a marine propelling screw. The drive system further comprises at least one converter which supplies the electromotor with power and an automatic control and monitoring device for the system. Said electromotor is designed for a long-term and reliable performance. It is especially protected from being entirely or partially demagnetized by supplementary structural and operational measures, for example circuit and control measures, regarding the motor and the converter.</p> <p>© KIPO & WIPO 2007</p>	SIEMENS AKTIENGESELLSCHAFT	KR1020027001 467	2002/2/2
263	Polymer induced Drag Reducing Method and its application to Ocean Thermal Energy Conversion technique	<p>PURPOSE : A drag reduction method and an ocean thermal energy conversion technique are provided to reduce the drag due to the warm current by adding a watersoluble high polymer material to the sea water.</p> <p>CONSTITUTION : For reducing the drag due to the warm current of the sea water, such a watersoluble high polymer material having large-sized molecules and linear structure as polyethylene oxide is added to the sea water in a cold sea water pipe. If the temperature of the sea water is high, the drag is reduced rapidly. Thus, energy loss is reduced and energy efficiency is enhanced. Herein, the molecular weight of the polyethylene oxide is from 4×10^5g/mol to 5×10^6g/mol. The optimal concentration of the polyethylene oxide is from 40ppm to 100ppm.</p> <p>© KIPO 2002</p>	INHA UNIVERSITY	KR1020000036 847	2000/6/30

264	Swimming apparatus combined with water ski and boat	<p>The device conveyor and frame for a ripplingthe devices as easily-honey regardless in submergence and conveyor for shooting a user. ripplingthe frame for a.</p> <p>The urging force of existing conveyor alternatively separate phase change without using and foot, a boot-shaped plate made large dioscin boat hands and reports loss of the terminal to the stick at the lower end of the funnel structure of packing portion, and at a player such as ski poles, can be with webfoot stick such as a and can be using is propelling the, it conceives the wool on scene boat-shaped boot in addition an upper plate with be shaped various type and is placed on the bath, followed by application of the top plate, such as ski poles, can be the (stick) to sit linearly through the lower site butterfly wing-shaped foldable consisting ash-faces an gradually the coil surrounds the movable conveyor and frame for a ripplingthe article is.</p>	KOO HYO HOE	KR2020010022 259	2001/7/23
265	Ship both monk appointment sheaves	<p>The device can be made to both use both monk appointment sheaves use cross-section of the vessel are disclosed. A plurality of pulley half according to the cross-section both use due to the use wear and prepares a new number by readily separating the small difference in cost of raw material consumption saving purchase expenses and maintenance combined according to according to the first bucket partcopyright 2000.</p>	JOO BI HO	KR2019940017 418	1994/7/12
266	Temperature difference and gravity ([...]) method using power energy	<p>[Purpose] to obtain the mechanical energy in temperature difference material same kinetic energy into low temperature Ne1 an RC has been used, which value of using all high temperature, temperature difference to a specific part of a device only invention power energy can be obtained respectively. device. [Configured] a stapler (1) central axis of (3) a bearing (4) of bracket to be capable of rotationally smoothly are connected into a central axis (3) secures the wall one of, within another 10 milliliter ammonia degree of 20% is-a crimped rubber it became the hose, Long line (2) for a stapler (1) and wires are anchored to, position (A, B) according one harm and Z31 and Z32 correspond to 37.5 temperature difference (A) rubber hose band 70 the heating thus dropping the is slowly fluctuation degrees Celsius the it comes to increase little by little, clockwise direction to obtain a power to be rotated is characterized in that the. [Effect] high temperature, low-temperature into driving 50 °c without fuel expensive gases including acidic gas like sprayed or can</p>	YOON BAEK KI	KR1019870000 484	1987/1/22

267	Hazardous waste incineration smoke pollution query	<p>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.</p>	빈센트 지 그레이	KR1019850003098	1985/5/7
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