序号	标题	摘要	申请人	申请号	申请日
1	Sealing arrangement for a propeller shaft and radiant soot	The invention pertains to a sealing arrangement (1) for a propeller shaft (2). wherein the propeller shaft (2) extends at least partially through a first chamber (3) and through a second chamber (4) of the sealing arrangement (1) into a sea water space (5). In the sea water space (5), a propeller (2) attached to the propeller shaft (6) is arranged. The first chamber (3) is at least is partially filled with a lubricant. The sealing arrangement (1) comprises a first seal (7) for sealing the first chamber (3) with respect to the second chamber (4) and a second seal (8) for sealing the second chamber (4) relative to the sea water space (5). In the second chamber (4), a first sensor unit (9) is arranged for detecting a physical quantity wherein the first sensor unit (9) further comprises first communication means (10) for wireless data transmission to a communication device (11). Further, this invention pertains to a beam rudder with such a sealing arrangement (1).	ZF Friedrichshafen AG	DE102020206318	2020/5/20
2	Method and device for monitoring a state of a gearbox	The invention pertains to a method for monitoring a state of a transmission cooler (6), and wherein in the transmission cooler (6) heat energy from an oil circuit (13) is transferred to a water circuit (14). Here, a water inlet temperature and a water outlet temperature are detected and a water temperature difference is determined from the water inlet temperature and the water outlet temperature. In addition, a corresponding arrangement for monitoring a state of a transmission cooler (6).	ZF FRIEDRICHSHAFEN AG	DE102019217032	2019/11/5
3	A multi-piece wind, comprising Marine-flow energy - Extraction plant	The system has a wide jacket, funnel-shaped laminar optimization unit adjusted by a hydraulic and pneumatic cylinder, and an articulated link. A net-shaped telescopic cylinder chain is aligned longitudinal to an upper surface of the jacket. The cylinder is aligned at a right angle to the upper surface. A roller and a grid separator are provided for adjusting and modifying the laminar optimization unit.	Lars Gunnar Liebchen	DE102006061745	2006/12/21

4	Buoyancy cell with reversibly variable buoyancy volume by volume change of a working means	The tunnelling cell according to the invention is the disadvantages of conventional cells, the loss of gas or pressure of internal volumes with excess/negative pressure is excluded. The lift is produced here by the reversible transition of an operating means, which is located in the hermetically sealed container (5), from the liquid phase (8) into the gas phase (9). This volume change leads via the inflow/outflow (10) of the external medium (6) to a change in the buoyancy which can be maintained for any desired long and without energy supply via the closing of a valve (7). The volume change is usually realized by means of heating/cooling devices (13) (14). The containers (1) (4) involved in lift production are closed with respect to the interior. The following shall be regarded as working tools, in particular Liquid boiling points between 30 °C and 50 °C.	Eckhard Kaufmann	DE102018009014	2018/11/16
5	A vehicle having a fluid-mixing system for autonomous	A vehicle includes a fluid mixing system. The fluid mixing system includes a fluid and a heat engine. The fluid has a first fluid region at a first temperature and a second fluid region at a second temperature that is different from the first temperature. The heat engine includes a shape-memory alloy disposed in heat exchange contact with each of the first fluid region and the second fluid region. The heat engine is operable to mix the fluid between the first fluid region and the second fluid region in response to a change in the crystallographic phase of the shape-memory alloy to reduce the difference in the composition of the fluid bath between the first fluid region and the second fluid region.	GM Global Technology Operations LLC (n d Gesetzen des Staates Delaware)	DE102010054269	2010/12/13
6	Generating energy from heat sources on the seabed	The invention relates to devices for generating energy from heat sources on the seabed, which occur as hot spots are in the form of more breaking out of lava, or fed by Magma thermal vents. The energy of these hot spots are both at the location of their occurrence can be used directly, or through a pipe system by this heat transporting to the installations for the production of electricity or mechanical energy to or brought under water. All the installations are suitable, a pressure - and/or temperature gradient which can into mechanical or electrical energy converting. These are with steam -, heat - or pressure water operated aggregates, Stirling engines, or Peltier elements, generating direct current from temperature differences.	Ingo Daude	DE102017001055	2017/2/4

7	Magnetic phase transition use for improving electromagnet	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.	Thales Holdings UK Plc	DE102017208191	2017/5/16
8	Structure as for generating electrical energy from heat	The invention relates to an underwater system (15) for generating electrical energy from heat. The object of the invention is to create an underwater system (15) for generating electrical energy, by means of which this energy can be inexpensively provided on the ocean floor (9). This problem is solved by an underwater system (15) which is stationed on the ocean floor (9) and the heat is geothermally obtained from the depths beneath the ocean floor (9). A line from the water surface or from the land is not necessary for electrical supply of devices located on the ocean floor.	Robert Bosch GmbH	DE102015205284	2015/3/24
9	The constructional unit for alternative production of electric power by	Protected a construction unit for alternative recovery of electric power is to be on the basis of the temperature difference by [...]. This The constructional unit is designated as CID (Carefree Independent Dom).	Ralph Kietzmann	DE102014003834	2014/3/18
10	more energy-producing Ship stabilizer : Method Vessel stabilisation and energy production on sea-going vehicles	The invention relates to a method for ship stabilization and energy generation on seagoing vehicles, characterized in that masses on a ship are supported flexibly on a means for transferring pressure and volume, the oscillations of the masses are damped by the means for transferring pressure and volume, and simultaneously the pressure fluctuations thereby occurring on the means for transferring pressure and volume are used to convert kinetic energy of the flexibly supported masses into electrical energy and/or thermal energy. The invention further relates to a device for performing the method. The ship stabilizer according to the invention can be used for all seagoing vehicles, whether on a lake, river, sea, or ocean, regardless of size, purpose, drive type, and hull shape, which ship stabilizer converts ship movements caused by waves into energy (e.g., electrical energy or thermal energy) without impeding the task of the ship (e.g., transport). The invention is characterized by the flexible support with energy-generating damping (e.g., hydraulics, pneumatics, water, etc.) of any mass that oscillates with the ship (e.g., cargo, persons, ship installations and superstructures, or ballast).	Mathias Fege	DE102013018075	2013/11/25

11	Floatation structure for e.g. manned underwater craft, has actuator that is arranged for varying density of filling material	The invention relates to a float 20 20 14 with at least one submersible region has at least one chamber 24 here. The submersible range variable volume on is filled at least partially with a filler 34. In the area of chamber 36 is arranged in the chamber 24 or an actuator 24, 34 varies with the density of the filler is. Also the invention relates to a method for burning and or emergence of a submersible 20 14 20 a floating body region with at least one submersible range.	ATLAS ELEKTRONIK GmbH	DE102011057091	2011/12/28
12	Maritimes Computer Bureau and operating method	The marine computing center is provided with an ocean energy power station for generating electrical energy. A computing arrangement (12) is electrically coupled with the ocean energy power station. A communication device is provided for news technical link of the computing arrangement to a data network. The ocean energy power station is configured as flow power station. The computing arrangement has data processing and heat-generating electronic components. The heat generating electronic component is coupled with ambient seawater for thermal cooling. An independent claim is included for a working method for executing a data processing task in an arrangement.	Fujitsu Technology Solutions Intellectual Property GmbH	DE102011115657	2011/9/28
13	towed sonar planttowed sonar plantsonar mission by means of such a as well as a method for performing a	The system (10) has a transport device (32) i.e. winch, for respectively transporting and retrieving a trailing antenna (14) in and from a water body. A signal processing device (28) processes signals of the antenna, and a control console (30) controls the system. The antenna, transport device, signal processing device and console are installed in a container (12) that is transported independent of a ship. The antenna is heavier than water and has an acoustically active section comprising attaching units for attaching anchoring devices that anchor the section on bottom of the water body. The water body is ocean, inland sea, lake, river or mouth of river. An INDEPENDENT CLAIM is also included for a method for carrying out a sonar mission by a towed array sonar system.	ATLAS ELEKTRONIK GmbH	DE102011000948	2011/2/25

14	ELECTRICAL MACHINE FOR THE PRO PULSE ION DRIVE OF A SUBMARINE WITH A PERMANENT MAGNETICALLY EXCITED SYNCHRONOUS MACHINE	The invention relates to an electric machine for the propulsion drive of a submarine by means of a synchronous machine (1) excited by a permanent magnet. Said electric machine comprises a stator (2) wherein a stator coil (3) is arranged. The aim of the invention is to produce said type of electric machine with high redundancy and reliability, greatly reduced noise output during operation and a high degree of winding and earth connection security compared to prior art. According to the invention, the stator coil (3) is configured as a shaft coil (3) and comprises a plurality of phase windings. Each phase winding of the shaft coil (3) is fed by a separate, single-phase frequency converter, whereby the frequency converters are embodied in the form of frequency converter modules (6) inside the synchronous machine (1) and are arranged in an axial direction in a frequency converter holder frame (13) between an A-sided end shield (11) and a B-sided end shield (12).	SIEMENS AG	DE50312714	2003/12/19
15	energy transfer machine and method	A novel engine for producing power from a temperature differential with additional benefits of low cost, high efficiency, quiet operation minimal wear of components, and the ability to produce power or cooling from low grade heat sources.	COLD POWER SYSTEMS INC	DE112008001613	2008/6/18
16	Method of harvesting/storing/converting energy for charging system of vehicle, involves locking storage element in modified condition and converting	A system and a method for collecting, storing and converting naturally occurring energy that an active material, and more preferably a shape memory element is exposed to environment activation statusenvironment activation signal or a one, a portion of the energy is recovered, by the element is deformed or stretched pseudoplastic superelastic, the energy is stored is effected by a change in the element is brought into engagement and/or a locking mechanism, and the energy is converted, by the mechanism is exposed to an activation signal and/or the mechanism otherwise is solved.	GM GLOBAL TECH OPERATIONS INC	DE102009048282	2009/10/5

17	Electrical energy generation method for measuring and transmission unit in engine, involves using cool air flow for generating electrical energy, and supplying generated electrical energy to measuring and	The invention relates to a method and a corresponding device for generating electrical energy, the in an apparatus, a machine or a technical installation for feeding a measuring and transmitting device is used, wherein an air flow or temperature differences in or on the apparatus, of the machine or of the plant for generating electrical energy are used. As a first embodiment variant, an arrangement is proposed, in which in a cooling air flow (1) a micro-fan or-fan (3) is arranged is coupled with an electric generator, of the measuring and transmitting device feeds. In a second embodiment variant is a thermoelectric converter (5) arranged, whose hot-side with a cooling fin (4) or a heat sink in or on a device, a machine or an installation is thermally coupled, and its cold side directly or indirectly is exposed to any cooling air flow.	ABB RESEARCH LTD	DE102007051672	2007/10/26
18	Power plant for recovering the heat of a geothermal reservoirs	A support structure (SS) (2) in the sea has a power house plant (1) that has components for using a geothermal area and uses pipe lines (11) to link to high-pressure gas reservoirs (51) among them. Energy converters like wind energy plants (7), sea wave converters (8), sea flow converters (54), etc. integrate directly into the SS to produce current.	PFLANZ TASSILO	DE10343544	2003/9/19
19	Method for operating a wind turbine	The invention relates to a method for operating a windfarm comprising a rotor (18) that can be actuated by wind and that comprises at least one rotor blade (22), a generator for converting mechanical energy of the rotor (18) into electrical energy, in addition to a tower (14) on which the rotor (18) is arranged. The generator of the wind energy farm (10) is supplied, as required, with mechanical energy by an internal combustion engine of a thermal power station, in particular a steam turbine (30) of a steam power station (24), which the generator converts into electric energy.	DAUBNER STOMMEL GBR	DE102006028810	2006/6/21
20	A ON HYDROGEN BASED ECOLOGICAL SYSTEM	A hydrogen storage bed capable of storing and releasing hydrogen comprising : a hydrogen storage alloy material; a solid support means having a high porosity and a high thermal conductivity, wherein said solid support means holds said hydrogen storage alloy material in a fixed position; a plurality of hydrogen flow channels configured to : 1) transport hydrogen into and thermal energy out of said hydrogen storage alloy material during storage of hydrogen therein; and 2) transport hydrogen out of and thermal energy into said storage alloy material during release of hydrogen therefrom.	ENERGY CONVERSION DEVICES INC	DE60033686	2000/11/14

21	CYCLONE EJEKTIONS PUMP	A cyclonic ejection pump is designed for large flow rates, for example, applicable to the so-called "Oceanic Thermal Energy Conversion, " normally abbreviated to OTEC, an energy generating system developed for utilizing the potential thermal oceanic energy as well as for those applications for which a large capacity is required, such as the propelling of vessels. The pump is also able to function as a non-return valve.	BEERLINGS SCIPIO PIETER SJOERD	DE69928764	1999/5/20
22	Thermoelectric terrestrial heat-cogeneration plant for heating buildings with terrestrial heat and at the same time	The plant has two water circuits of which one has hot water and the other has water at lesser temperature. The plant also has a double-tube thermoelectric generator. Heating elements or other hollow bodies, in which water can be guided, can be used alternatively and can be connected to the thermocouples.	MANSK LEOPOLD	DE102004023428	2004/5/9
23	Heating device, in particular for heating the interior of a motor vehicle	PCT No. PCT/DE96/01225 Sec. 371 Date Oct. 29, 1997 Sec. 102(e) Date Oct. 29, 1997 PCT Filed Jul. 2, 1996 PCT Pub. No. WO97/02516 PCT Pub. Date Jan. 23, 1997The invention concerns a heating appliance which is protected against overheating in that the temperature increase during operation of the appliance is monitored. If the temperature increases too rapidly, the heating operation is stopped. According to the invention, temperature increase values are determined in a close chronological succession and/or a mean value is calculated in order to compensate signal noise from the temperature sensor.	EBERSPAECHER J GMBH CO	DE19524260	1995/7/4
24	Geothermal wind energy electrical generator has surface air intake to sub-surface system of hot rock tunnels and turbine	A geothermal energy- upwind power station with discharge opening tower, the couples dOLLARupwind power stationmine plant an underground Tunnelling system or a with a by the forthcoming inlet pits and ambient air is drawn in. by mountain temperature heated A. The heated air rises in the upwardly and exit slot/ discharge opening tower a gads in the tower being provided to the turbine at. The inlet buildings and/or efficiency of the installation can by the arrangement of valves and flaps and/or other heat exchangers in said shafts be increased and regulated.	BARTMINN DANIEL	DE102004002316	2004/1/16
25	PROPELLER DRIVE WITH A PHASE ADJUSTER FOR ADJUSTING THE		AIMBRIDGE PTY LTD	DE69918340	1999/4/15

26	Convective energy recovery in closed flow system involves thermodynamically describable or defined closed circulation process occurring in heat transport medium for each circulation in circuit system	The method involves locating a heat source underneath a heat sink, resulting in pressure differences in local sections of the flow circuit or within a heat transport medium and a thermally initiated gravimetric-convective heat transport medium flow. A thermodynamically describable or defined closed circulation process takes place in the heat transport medium circulating in the circuit system for each circulation. The method involves subjecting a heat transport medium to a convective hydromechanical flow as a result of heat exchange processes by locating a heat source (3) underneath a heat sink (7), resulting in pressure differences in local sections of the flow circuit or within the heat transport medium and a thermally initiated gravimetric-convective heat transport medium flow. A thermodynamically describable or defined closed circulation process takes place in the heat transport medium circulating in the circuit system (1) for each circulation. AN Independent claim is also included for the following : (a) a device for implementing the inventive method.	BECKER CLAUS; SCHWARK WERWACH BERNHARD; HABERKORN PETER F	DE10234568	2002/7/30
27	Heat engine includes containers for hot and cold fluids, with interconnected, immersed gas	The apparatus includes containers (79, 80) for cold and hot fluids (3, 4). Two or more gas vessels (75, 76) have open bases and dip into the fluid in one or other of the containers. A gas line connects the vessels and heat storage material is provided on or in the gas line and/or the gas vessel. A controller is provided for up and down reciprocation of the gas vessels, which are immersed to differing extents.	ZERAWA ALEXANDER	DE10114977	2001/3/27
28	System for generation of esp. regenerative energy esp. for use on islands consists of basic installation and add-on e.g.	The generation system uses a simple basic installation, with individual units of simple components added to it, dependent upon the type of energy required. These are mechanical oscillation devices, e.g. chains, with two or more gas springs to generate pressure gradients for the conveying of fluids, and with fluid pistons, which require no sealants and lubricants. The system is of enclosed construction, to make it maintenance-free and operationally friendly.	SCHULTE ANTON	DE10024668	2000/5/18
29	Generation of electrical energy from thermal energy by the Seebeck effect e.g. for use with a	Generation of electrical energy from thermal energy by utilizing the thermoelectric effect (Seebeck effect) requires using a Peltier module as a power module or a Seebeck module for utilizing the natural (air) temperature, the wind - and climate-difference in the environment and/or the waste heat of technical plant for the purposes of current (power) generation.	PALME KLAUS	DE19946806	1999/9/29

30	Maritime Power plant with manufacturing process for the production, storage and for consumption of	A maritime power plant system for producing, storing and consuming regenerative energy has a support structure on which energy producing devices for producing a continuous supply of energy by at least two different methods from regenerative energy sources are provided. The regenerative energy sources are ocean water, ocean waves, wind, and solar radiation. At least one industrial production facility is also connected to the support structure. A submarine reverse osmosis device is provided.	PFLANZ TASSILO DIPL ING	DE19714512	1997/4/8
31	Method for independent Land propelling Rome net, water, air and space vehicles by high temperature accumulators	The invention relates to a method for actuating nonsystem-connected vehicles by means of high-temperature accumulators and for the operation of stationary energy storage using material with high evaporation enthalpy as storage media for high-temperature heat. Said high-temperature heat is generated by means of current transfer and can be stored for a sufficient length of time by means of super isolation and high-temperature resistant carbon materials. On demand, the stored high-temperature heat can be converted directly into electric operating energy, specifically pressure energy, for actuating hydraulic motors by means of a thermionic generator or a Stirling motor. The average capacity of high-temperature accumulators is 10kWh/kg greater than that of internal-combustion machines and is 100 times greater than the present highest capacity electro-chemical working accumulators, thus enabling the operation of all fuel operated vehicles to be more comfortable, more affordable and cleaner in the future due to high-temperature accumulators.	FOPPE WERNER	DE19734733	1997/8/11
32	Compact apparatus producing energy from water and hot air	The apparatus contains liquefied gas or another liquid with low boiling point in a pressurised reservoir, from which it is pumped into a system of tubes warmed by the waste heat from a fan. The liberated heat vaporises the liquid to drive a gas turbine coupled to an electric generator. The gas is cooled by expansion at the nozzles and condensed in a heat exchanger for recirculation. The heat exchanger is subcooled by cold air produced e.g. by vaporisation of water.	LANGER MANFRED	DE19535862	1995/9/18

33	Method of converting thermal energy into mechanical one	In the conversion of the thermal into a mechanical energy a fluid is subjected to a circulating process. For utilising of temp. differences below 100 deg.C a coolant is used as the fluid. Pref. solar energy is used as the thermal one, but geothermal energy may also be used. Typically the thermal energy is subjected to buffer storage. The fluid is evaporated by heat supply, the vapour drives a turbine, and the fluid condensed after mechanical energy generation.	GARTMANN ROLF DR; GARTMANN JOERK	DE19517897	1995/5/16
34	Low temp. heat engine e.g. for vehicle, current generator, refrigerator	The low temp. engine consists of a pump (1) with a drive (14), an alternative drive (15), an evaporator (4), an expansion machine (8) with a throttle (7), a liq. collector (10) and piping (2, 6, 9, 11) and a fluid used as energy carrier. The energy carrier is a gas mixt. which circulates in a closed circuit but in opposition to the refrigeration machine or heat pump, which has and extremely how heat of evapn., and extremely large vapour : liq. vol. ratio and an extremely large pressure difference between the low and high pressure sides. The thermal energy for achieving the evapn. temp. may be obtained from solar heat, low temp. waste heat, heat from atmospheric air without preheating and even below 0 deg. C, ground heat, ground water and surface water.	RAUSCHER GEORG	DE4304688	1993/2/16
35	Conversion of heat into mechanical energy - based on expansion and contraction-working fluid on heating and near-freezing	A process is claimed for converting heat into mechanical energy, for generating alternative energy or general energy requirements, esp. for utilising renewable heat sources, pref. by making use of natural temp. difference in the low-temp. range, using a liq. working medium that expands and contracts on alternate heating and cooling in a pressure-stable chamber. The process is characterised in that the working medium in one working cycle is cooled down to its m.pt. and its heat of fusion is withdrawn; the amt. of heat withdrawn is limited so that the working medium remains flowable and the flowability of the working medium is utilised to increase the heat exchange per unit area; and the expansion vol. on heating the working medium is used for mechanical work. ADVANTAGE - Preventing the working medium from solidifying increases the no. of cycles that can be completed in a given time (cf. DE 2814215).	SOELCH ROLAND	DE4238572	1992/11/16

36	Pump drive using temp. difference - has several well insulated chambers in heat exchangers each holding medium at different temps.	The pump drive comprises a slide (1) on which double cones (2, 3) are fitted. On the cones are fitted insulators (4, 5) of strong material, and which counteract the heat exchange on adjoining parts. On the one insulator (4) is mounted the pump inner housing (6) and on the other (5) the pump outer housing (7). The pump inner and outer pistons (8, 9) comprise L-profile rings, and form together the pump chamber (26). They are fitted with sealing ribs in which sealing rings (10, 11) are accommodated. On the pump inner housing (6) is fitted a bearer flange (15) which operates a heat pump (17), whilst a similar flange (16) on the outer pump housing (7) drives a refrigerator (18). Heat exchangers (19, 20) are fitted on the face sides of the slide (1), and are divided into differing chambers (27) contg. a medium to which a predetermined heat content has been imparted. USE/ADVANTAGE - To convert waste heat into other forms of energy.	WEISS HANS 7450 HECHINGEN DE; WeissHans Hechingen 7450 DEHechingen7450DEDE	DE4015879	1990/5/17
37	Process for using energy potentials, especially with small temperature differences.	A process is claimed for utilising thermal energy potentials (esp. of small temp differences) or mechanical energy potentials, esp. of naturally occurring environmental energy sources (e.g. counterflowing ocean currents or ocean currents and ambient air) or of sec. and environmental energy sources resulting from industrial energy conversion and use, the temp. differences being sufficient for driving electrical energy generating processes. - The novelty is that (a) the temp. drop between the energy potentials is used to drive electrical energy generating processes, (b) the generated electrical energy is used at or near the generating site for electrolysis of liq. or evapd. water and metal oxides, (c) the resulting hydrogen and metals are chemically combined to form metal hydrides, (d) the metal hydrides are transported as energy source (i.e. synthetic fuel) to the site of energy need where they are combusted with technical purity 02 or air in fuel cells to release electrical and opt. thermal energy or in special combustion chambers to release thermal energy, with prodn. of metal oxides and steam.	UET UMWELT UND ENERGIETECHNIK GMBH O 8030 DRESDEN DE	DE4017684	1990/6/1

38	Method for operating a thermal power plant.	The invention relates to a locally usable thermal power station for the generation of mechanical energy and/or process heat and/or propulsion energy. A liquefied gas (working medium) is delivered by means of the vaporiser admission pressure (Fig. 7/1b) into the first vaporiser stage (Fig. 7/1a) and vaporised as it flows further through the vaporiser unit (Fig. 7/1). The enthalpy fed to the vaporiser unit is broken down into components (Fig. 7/2) yielding work and the expanded gas is delivered into the condenser (Fig. 7/3) and liquefied. In the subsequent process the condensate is alternately introduced into or separated from the pressure vessel (Fig. 7/4a or 4b)by way of a connecting line and subjected to the system pressure of the vaporiser components (Fig. 7/1b), in order to deliver the contents into vaporiser components (Fig. 7/1a). The working sequences summarised under Fig. 7/2 can be performed as follows : A compensating vessel, divided into two chambers and filled with a barrier liquid, is filled with a possibly precompressed gas. The system pressure generated in the vaporiser (Fig. 7/1) is admitted to the second chamber of the compensating vessel and initiates a recompression of the medium present in the chamber (Fig. 7/1) and permits onward transmission into the volume accumulator unit (Fig. 7/5). The working medium can then, to work off the remaining pressure difference with respect to the condenser, be ... into a ... Original abstract incomplete.	NOPPER HELMUT	DE3609314	1986/3/20
39	Process for recovery of energy - utilises its own energy, ambient temp. and temp. difference is inversely proportional to	Ambient temp. is divided into an optional number of media (102, 103, 104 ...) and areas (2, 3, 4). Medium (102) is subordinate to medium (101) in area (1) and so on, each succeeding heat medium being subordinate to the preceding ones. An amount of energy (14b) passed to medium (101) will be emitted to the desired number of subordinate media (102, 103, 104 ...) by means of energy utilising devices (13a, b, c ...) linking the areas (2, 3, 4 ...). USE - Utilises energy which would otherwise dissipate into infinity.	PEYLO ANDREAS	DE4025579	1990/8/11

40	Heat energy recovery process - extracts heat from water below ice sheet	The device recovers energy using the temp. differential between the water under an ice sheet, and the colder ambient air. It has an evaporator (3) to extract heat from the water (2), and a condenser (7), to feed the heat to the ambient air 910). There is a steam turbine (6) between evaporator and condenser and a connection tube (8) between the two, for the working fluid (9). The evaporator is located under the ice (1), facing the warmer water, and the condenser is located in the cold air. The air-cooled condensate (9) passes thorugh a body, conducting the heat from the water, where it takes up the heat, and feeds the boiling fluid to the evaporator. USE - Energy recovery from water under ice sheet.	PEYLO ANDREAS	DE4000240	1990/1/6
41	Heat-energy conversion process - uses fluids with low boiling point as working medium	The process is for the conversion of heat energy into mechanical energy. Two masses of a fluid working medium are spearated by the pistons (1, 2) of a cold (3) and a warm (4) double-acting cylinder, and are transported by these pistons, alternately, and oppositely from the cold into the warm cylinder, and vice versa. The cold piston (1) moves phase-shifted before the warm piston. The working pressure is built-up between them, and the pressure at the back of the pistons is reduced. The cylinder capacities are arranged for the same masses, but different volumes, due to working medium heating. USE - Heat engine using small temp difference.	HAEBERLE WILHELM	DE3939779	1989/12/1
42			HAEBERLE WILHELM 7486	DE8914171	1989/12/1

43	METHOD AND OCEAN-GOING VESSEL FOR OFFSHORE INCINERATION OF HAZARDOUS WASTE MATERIALS	A method and an ocean-going vessel are disclosed for more effectively incinerating hazardous liquid wastes at sea. Intermodal shipping tank containers (12) are filled at waste generation sites; transported to dockside and loaded above decks on an incinerator ship (15); taken out to sea and incinerated in horizontal, liquid burning type incinerators (17) so that the effluents emerge horizontally. Wastes flow by gravity from containers (12) into staging sumps (217) located below decks, and then pumped to incinerator. Pollution abatement tanks, (206) 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.	GREY VINCENT G	DE3573413	1985/3/4
44	CONTINUOUS ELECTRICAL SYSTEM SUPPLY FROM THE DRIVING NET WITH THREE-PHASE ALTERNATING CURRENT MARINE ENGINES OF VARIABLE FREQUENCY AND PARTIAL STATIC FREQUENCY CHANGERS	1. Arrangement for the board mains supply in a polyphase alternating current ship's drive of variable frequency with a propulsion generator (3) driven by a primary energy converter (2), a starting-up inverter (5 to 8) and a propeller motor (1) fed at a constant ratio of voltage to frequency, wherein the propeller motor (1) is connected - in a lower rotational speed range at constant minimum rotational speed of the primary energy converter (2) - by way of the starting-up inverter (5 to 8) and - in the range above the minimum rotational speed - directly with the propulsion generator (3) in the manner of an electrical shaft, characterized by an arrangement for the continuous energy supply for the board mains by the primary energy converter (2), wherein board mains frequency and voltage are supplied in the lower rotational speed by the propulsion generator (3) by way of a transformer (4) between propulsion rail and board mains rail or from a further generator (9) coupled to the propulsion generator (3) and wherein - in the range above the minimum rotational speed - the starting-up inverter (5 to 8) is separated from the propeller motor (1) and connected with the interposition of a synchronous phase changer (12) to the board mains.	LICENTIA GMBH	DE3310506	1983/3/23

45	COMPACT MIST FLOW POWER GENERATOR	An ocean thermal energy converter (OTEC) generates electricity from warm surface water in dropping 100 meters or so, and then raises it back to the surface using its own thermal energy in a large floating vacuum chamber. The mist flow process as described in U.S. Pat. No. 4, 216, 657 is employed to accelerate water droplets and water vapor upward from the bottom of the chamber under a pressure difference created by spraying cold water from lower ocean levels into the same chamber. The cold water is sprayed upward and parallel to the upper side walls of the chamber to control the flow of the warm droplets, as well as condense the vapor. This cold spray has too small an initial velocity to reach the top of the chamber, but receives momentum from the accelerated warm droplets. The warm water may be injected substantially vertically or alternatively at an angle inclined toward the axis of the chamber to assist in coalescing and concentrating the stream after the individual droplets have been accelerated upward.	R D ASS	DE3379475	1983/3/23
46	Method and arrangement for determining the fuel consumption of ocean-going ships	The invention relates to the field of ship propulsion and its economically advantageous management. The object of the invention is to improve the management of the main engine by determining the actual quantity of fuel consumed in every operating condition by means of sensors. For this purpose, the actual values for thermal, intrinsic and kinetic energy of the storage media and their rates of change are determined as a function of the current speed of the ship, using the known operating instrumentation. Thus the transient component of fuel consumption is determined. The analysis of the running mode thus made possible provides a continuous diagnosis of the operating state of the machinery. ;	VEB KOMBINAT SCHIFFBAU	DE3725119	1987/7/29

47	Solar chimney power station	It utilises the difference between the temperature of a body of water and the lower temperature of the ambient air to operate. This temperature difference exists : A) if frosty air lies over the ice-bound sea in winter; B) if warm ocean currents reach regions with a colder climate; C) if the solar chimney power station is erected high above the sea on a mountain or framework. Thus solar chimney power stations in accordance with the present invention can supply energy at the right time considerably more continuously than has been possible to date using solar or wind energy directly. But since there are only relatively small temperature differences, economically viable quantities of energy can only be supplied from tall solar chimneys. Solar chimney power stations in accordance with the present invention receive air heated not by the sun, but by the warmer waters in the solar chimney. Heat exchangers in the body of water and the solar chimney provide for the necessary transfer of temperature by means of a liquid heat transfer medium. The liquid heat transfer medium can be cycled without pumps by the thermosiphon effect. The liquid heat transfer medium can be used in a simple manner as protection against icing up of the air intake paths and of the wind turbine. One possible version is shown in the enclosed diagram (Fig. 1), where : 1. Ice on body of water, 2. Body of water, 3. Heat exchanger in body of water, 4. Pipelines, 5. Heat exchanger in tower, 6. Solar chimney, 7. ... Original abstract	BUELK EGGERT	DE3636248	1986/10/24
48	Method for obtaining energy	Published without abstract.	STANGER HARALD	DE3624357	1986/7/18

49		1515561 Utilizing the energy in a fluid stream; turbines D Z BAILEY 16 May 1975 [24 May 1974] 20875/75 Headings F1S and FIT Apparatus for utilizing the energy in a fluid stream includes spaced anchorage means 10, 11, elongate suspension means spanning the stream transversely of the stream flow and having end portions attached to the anchorage means, at least one dynamic reaction foil element 24 attached to the suspension means, aligned therewith, submerged in the stream and extending transversely of the stream flow and power generating means 19 connected to be driven by movement of the dynamic reaction foil element responsive to forces induced thereon by the moving stream 27. As shown a plurality of spaced floatation barges 17 are employed to support the suspension means. The suspension means consists of a flexible suspension cable harness having a plurality of cables 12 with a hydrofoil element 24 mounted on each cable. A plurality of spaced motors 21 are rotatable with the harness. In a modification (not shown), rocker frames are employed each carrying a pair of hydrofoils.	BAILEY DAVID ZABRISKIE PROVIDENCE R I US	DE2523030	1975/5/22
50	Method and arrangement for influencing the boundary layer of bodies in a fluid flow mainly during stochastic flow fluctuations	In order to influence the boundary layer of bodies in a fluid flow with the aim of reducing the resistance or of preventing flow separation, a system of vibration pick-ups and transmitters is provided in the body surface in such a way that, mainly during stochastic flow fluctuations, a periodic vibration of the same frequency is superimposed on the predominant stochastic frequency. The periodic signal amplified by the flow fluctuation can subsequently be extinguished in opposite phase or amplified in identical phase by a further vibration transmitter.	MESSERSCHMITT BOELKOW BLOHM GMBH	DE3316393	1983/5/5

51	Differential heat engine	The special feature of this stroke piston engine is that the superpressure or reduced pressure in the cylinder chambers is generated via the heating or cooling, respectively, of the gases via the cylinder walls. Since no combustion is involved, the temperature changes take place more slowly and, correspondingly, the design features of the engine are also characteristic : a) series arrangement of cylinders (pistons), no valves, slots, connecting rods and crankshaft, so that a closed working process and one-stroke process are possible. b) Relatively small temperature differences between the cylinders, and slow expansion or impansion of the gases in the cylinders, require high-pressure loading, holding top dead centre, sealing top dead centre and piston pressure equalisers. Thus, for example, the engineering problems of the engine mainly concern, because of the high-pressure loading and holding of top dead centre, the sealing and take-off of the mechanical energy, while the advantages are predominantly to be found in the usability of heat energy at relatively low temperature or temperature difference, and absence of exhaust gas. The internal conversion of the stroke motions into electrical pulses with simultaneous parallel arrangement of a plurality of units to give a battery made it possible to generate current by combustion of low-grade fuels as well as from waste heat and solar energy, o	KNOTT FRANZ JOSEF	DE3240566	1982/11/3
52	THERMAL-POWER PLANT FED BY A GEOTHERMAL HEAT SOURCE	The invention concerns a thermo-electric power station, supplied by a geothermal heat source, involving the use of at least two fluids. The first fluid (water) makes it possible to transfer the geothermal energy from the subsoil to the power station. The fluid is pumped into the subsoil through a downcast shaft (29, 33) and returns, after being heated to a pre-established temperature, via an outlet shaft (28, 32). The second fluid is carbon dioxide, which, through direct contact with the first fluid, absorbs the latter's thermal energy and transforms it into mechanical energy via successive machines (7, 8, 9). A possible third fluid (ammonia) produces, in an absorption refrigerator plant (2), the refrigeration necessary for lowering the temperature and, therefore, the pressure of the second fluid when it leaves the last machine (9), thus making possible the pre-established optimal pressure stage.	SANTI GIUNIO GUIDO	DE3063456	1980/6/16

53		For conveying very large volumes of sea water from sea bottom to the surface in order to exploit the temperature differential between the surface layers and the bottom layer and thus produce power, a flexible conduit is provided which is composed by cylindrical sections of a resilient reinforced material connected by hoops of a rigid material, an array of cables extending longitudinally of the conduit being secured to said hoops. The conduit can be assembled or disassembled by a stepwise operational sequence.	TECNOMARE S P A VENEZIA IT	DE2907639	1979/2/27
54		1, 226, 035. Liquefied gas storage containers. CONCH OCEAN Ltd. 18 Sept., 1968 [12 Oct., 1967], No. 44324/68. Heading F4P. A non-self supporting fluid-tight cold-resistant flexible membrane tank 6 right hand side of Fig. 1, is supported against internal loads by a surrounding solid thermal insulation 5 which is itself supported by a rigid shell 2, e.g. the inner hull of a tanker and the membrane tank 6 is anchored to the insulation by rigid anglesectioned members 19, Fig. 5, which extend along and are secured to the junction of adjacent side top and bottom walls of tank 6 and referred to as corners, and members 19 are also rigidly secured to the corners of the insulation 5. The membrane tank is formed of nickel-steel corrugated sheets 16 and corrugated dihedral corner-pieces 17 and trihedral corner-pieces 171, Fig. 4, to which are welded the angled anchor members 19 along regularly spaced intervals along the lengths of the corners of the membrane tank. Members 19 are bolted to spaced hardwood blocks 21, 22, adhesively secured to insulation panels 8 constructed as described in Specification 951, 923. The spaces between adjacent hardwood blocks is occupied by balsa wood blocks 23. A modified membrane tank 41, Fig. 10, has stepped top and side walls providing internal entrant corners a and external re-entrant corners b.	CONCH OCEAN LTD NASSAU BS	DE1802114	1968/10/9

55	Energy from temp. difference between two levels - is extracted by evaporation at low and condensation at high level using liq. to drive turbine	The arrangement is intended for extracting usable energy from a medium flowing in a system in which there is a temp. differential between two points at different levels. It comprises a closed circuit (WTu R1 Wto R2 FT) which contains a low-level heat exchanger (WTu) a higher level heat exchanger (WTo) and a liquid-driven turbine (FT) or hydraulic motor. This circuit contains a fluid which evaporates in the lower exchanger (WTu) rises (R1) to the upper exchanger (WTo) where it returns the heat extracted to the medium and condenses and then drops (R2) to the turbine (FT) where its potential energy is converted into mechanical energy before re-entering the lower exchanger.	WEBER DIETMAR	DE2905255	1979/2/12
56	Power generator utilising natural energy - has vessel containing fluid descending by gravity and fluid rising by geothermal	A deep shaft (10) is bored into the soil. A hollow container (12) with a rod (14) can move up and down the shaft. It is filled at the top with a liquid of high specific weight and low specific heat capacity. The weight causes the container to fall down. It pulls the rod (14) with it and this drives a generator. At the bottom of the shaft the high temperature in the soil evaporates the liquid and the vapour rises through a bore (15) in the rod (14). The container is then pulled up mechanically with the consumption of less energy than was generated by its fall.	THAMS HANS	DE2837771	1978/8/30
57	METHODS AND APPARATUS OF GENERATING POWER	Melted ice stored in a pool hollowed out of the upper surface of a tabular iceberg is used as a cold source and the sea on which the iceberg is floating is used as a hot source for a heat engine. Useful energy is extracted in spite of the low Carnot cycle efficiency and the melting of the iceberg to provide fresh water is accelerated.	ICEBERG TRANSPORT INT	DE2802100	1978/1/18

58	METHODS AND APPARATUS FOR USE OF ENERGY FROM uNDERGROUND ONEgEOTHERMAL SOURCES	A geothermal energy recovery system of improved efficiency makes use of thermal energy stored in hot, solute-bearing well water as it is pumped upward to the earth's surface through an extended heat exchange element for continuously heating a downward flowing organic fluid to a supercritical state. Some of the energy of the latter fluid is used within the well for operating a turbine-driven pump for pumping the hot, solute-bearing well water at high pressure and always in liquid state to the earth's surface, where it is reinjected into the earth in another well. The temperature difference between the upward flowing brine and the downward flowing organic fluid is maintained finite in a predetermined manner along the subterranean extended heat exchange element. After driving the deep-well turbine-driven pump, the organic fluid arises to the earth's surface in a thermally insulated conduit; at the earth's surface, vapor turbine electrical power generation equipment is driven by the heated organic fluid which is then returned into the well for reheating in the extended heat exchanger.	SPERRY RAND CORP	DE2715499	1977/4/6
59	FLOTATION CHAMBER FROM CONCRETE FOR THE TEMPORARY STORAGE OF LIQUIDS	A float for the intermediate storage at sea of crude oil, liquefied gas and the like, is formed of a toroidal body of revolution having a vertical axis. The toroidal body consists of a bottom plate in a form of a shallow annular shaped dish closed across its top by a circular cover plate. Partitions divide the interior of the body into individual compartments. Extensions projecting radially outwardly from the circumferential pheriphery of the body form docking surfaces and can house driving engines for propelling or positioning the float.		DE2461462	1974/12/24

60	tEMPERATURE DIFFERENCE - fLOW CENTRAL ENGINE	The invention describes a unit pair of chambers with means of obtaining a temperature differential between the chambers, The chambers contain a low boiling point fluid defining a liquid phase and a vapor phase. By closing and opening of a communication between vapor phases of the chambers, cyclic differences in vapor pressure between the chambers is obtained. At least one of said chambers is provided with a moveable wall portion which responds to changes in the vapor pressure in the chamber. This movable wall also controls the opening between vapor phases of chambers. Controls and conduits are provided to return the condensed liquid from cold to warm chamber, and the return of moveable portion to its starting position. By means of proper linkages, the moveable wall is translated into useful work.	SIEGEL ISRAEL	DE2517887	1975/4/23
61		A drive system, particularly for a ship, has a drive unit provided with a housing and an output shaft which extends from this housing and is rotatable about a first axis. A pair of transversely spaced supports engage and support the housing and connecting arrangements connect the housing, with these supports so that the housing can pivotably yield about a second axis which crosses the first axis.	AKTIEN GESELLSCHAFT WESER 2800 BREMEN	DE2330832	1973/6/16
62	METHODS AND DEVICE FOR wARM upmORE IN AN ISOLATED MANNER[...]lIQUID S ACCORDANCE WITH THE eMPTYsTORAGE VESSEL ON	A warm-up system for liquefied gas storage containers is operable as a closed cycle and comprises a reservoir containing a liquid heat transfer medium, pumping equipment for transferring the liquid from the reservoir to a vaporiser where the liquid is vaporised at an elevated pressure, and heat exchange elements within the storage containers for indirect heat exchange with the cold of said containers. The heat transfer medium for LNG is preferably a petroleum hydrocarbon such as isopentane and the vapour fed from the vaporisor may be adjusted to balance the heating rates of the containers.	CONCH INT METHANE LTD	DE2255746	1972/11/14

63		Relatively low temp. boiling point liquid is forced, by its own vapour pressure when heated, up a small bore pipe from the base of an enclosed vessel, to a height from which it falls through a cold cylinder under gravity and drives a turbine from whose outlet it passes into a sump vessel. At the end of a given working cycle, the two vessels are interconnted temporarily. Two identical vessels with separate pressure risers, interconnected by programme controlled valves to the central cold cylinder may be used for continuous economical prodn. of electrical or mechanical energy at esp. low power levels.		DE2118824	1971/4/17
64	Tanker for transporting cryogenic liquid solutions	1, 214, 055. Carrying liquefied gases. CONCH OCEAN Ltd. 3 Jan., 1969 [21 Feb., 1968], No. 8362/68. Headings B7A, B7M and B7S. [Also in Division F4] In a tanker for carrying liquefied gases, a fluid-tight tank 4 in hold 3 is externally insulated by thermal insulation 7 between the tank and the walls of the hold, the outer parts of the insulation adjacent the walls of the hold being formed with passages through which any water present may pass, the water being able to drain into sumps 11 near the bottom of the hold for removal through pipes 12 by pump 13. In the embodiments described the outer part of the insulation consists of timber fixing strips 6, 61 secured to the inner surface of the hold, the fixing strips being slotted as at 6a, 6b, 6c for the passage of the water.	CONCH OCEAN LTD	DE1908330	1969/2/19