

Search history

Search 1: SFT=(floating and offshore and concrete and eolic*) (Results 51)

1) Family number: 67495589 (WO17194813A1)

© PatBase

AUXILIARY **FLOATING** SYSTEM FOR THE INSTALLATION AND/OR TRANSPORT OF MARINE STRUCTURES AND METHOD COMPRISING SAID SYSTEM

Abstract: The invention relates to an auxiliary **floating** system (1) for the installation, transport or maintenance of a marine structure (2), the structure (2) comprising at least one essentially vertical shaft (4). The auxiliary **floating** system (1) comprises: at least one **floating** element (5) that remains semi-submerged during the process of installing the marine structure (2); at least one coupling structure (7) connected to the **floating** structure (5); and guiding elements (9) secured to the coupling structure (7) and in sliding contact with the shaft (4). Advantageously, the sliding contact between the auxiliary **floating** system (1) and the shaft (4) is such that it allows essentially vertical relative movement between the auxiliary **floating** system (1) and the shaft (4), such that during the process of installing the marine structure (2), said structure sinks while the auxiliary **floating** system (1) remains at essentially the same level on the surface.

Probable Assignee: ESTEYCO SAP

Earliest Publication Date: 20171115

2) Family number: 49554081 (US2011217122A)

© PatBase

METHOD, SYSTEM AND DEVICE FOR HARNESSING HYDRAULIC HEAD IN LARGE BODIES OF WATER

Abstract: Source: US2011217122A The invention provides a **floating** device, system and method for channeling, elevating, conducting and retaining up to the sea shore the higher hydraulic head of the ocean surface waves, which comprises a pontoon-like lower body protected externally by vertical walls, a bottom slab and a top slab, the latter slab may be the bottom or floor of the device; an upper body with lateral walls mounted on both sides of the pontoon-like lower body constitutes a wave canal, where the floor or bottom of the device on its seaward end has an entrance ramp, which together with the vertical walls on the seaward end of the pontoon, bank and elevate the waves collected from the flotation level of the device (1) whereas on its inland end, the bottom or floor of the device has a vertical gate that has the same height of the lateral walls mounted on both sides of the pontoon-like inferior body.

Probable Assignee: WAGNER FONSECA ERNESTO RODOLFO

Earliest Publication Date: 20110908

3) Family number: 48838664 (US2011266803A)

© PatBase

MARITIME DEVICE FOR PRODUCING ELECTRIC POWER

Abstract: Source: US2011266803A An energy accumulator and rectifier equipment for converting and generating renewable energy from ocean waves and winds, which includes a storage tank or compressed air accumulator, a series of vertical tubes filled with non-compressible fluid so that it can displace movable elements, forming a group, wherein each group is in connection with another similar group at both the upper level and the lower level by means of a fluid circulation pipes and by means of a pipe of smaller diameter, at the upper and lower portion, for air circulation, and wherein the fluid circulation pipes of every group are attached to a common pipe at the upper level which conveys the fluid toward a turbine-generator to produce electricity and a common pipe at the lower level to recirculate fluid toward the cylinders.

Probable Assignee: JORGE MARTINEZ MARDONES

Earliest Publication Date: 20101015

4) Family number: 51944028 (WO14013098A1)

© PatBase

SEMI-SUBMERSIBLE PLATFORM FOR USE IN THE OPEN SEA

Abstract: 1. The invention relates to a semi-submersible platform (26) comprising: an inner column (15) and at least four outer columns (14), in which each of the inner and outer columns (14, 15) is made from reinforced **concrete** and comprises a resistant base (12), a shaft (5a, 5b; 6a, 6b) and a section (7) located at a pre-determined height and having greater resistance. The semi-submersible platform also comprises a plurality of beams (8) at the aforementioned pre-determined height, which connect each outer column (14) to the inner column (15) and to each adjacent outer column, and a plurality of anchor lines (11) designed to be anchored to the more resistant section (7) of each outer column (14). The semi-submersible platform (26) also comprises a lower plate (9) on which the columns (14, 15) are secured and which is reinforced with a plurality of beams (13) that connect the base (12) of each outer column (14) to the base of the inner column (15) and to the base (12) of each adjacent outer column. The invention relates to a method for the construction of a semi-submersible platform.

Probable Assignee: UNIV CANTABRIA

Earliest Publication Date: 20120918

5) Family number: 55710685 (ES2440894B)

© PatBase

PROCEDIMIENTO DE FABRICACION DE UNA PLATAFORMA **EOLICA** MARINA, PLATAFORMA RESULTANTE Y SISTEMA DE APROVECHAMIENTO DE ENERGIA **EOLICA**

Abstract: Source: ES2440894B Procedimiento de fabricacion de una plataforma **eolica** marina, adecuada para la disposicion sobre ella de un aerogenerador electrico, que comprende las siguientes etapas: #a. Ensamblaje de elementos de flotacion. #b. Ensamblaje anadido de unos extremos de flotacion. #c. Union de los flotadores con una estructura de arriostramiento. #d. Posicionado y fijacion de una torre aerogeneradora en los flotadores y/o en la estructura de arriostramiento. #La plataforma **eolica** marina que comprende al menos dos flotadores, una estructura de arriostramiento y una torre aerogeneradora. #El sistema de aprovechamiento de energia **eolica** comprende la plataforma **eolica** marina y una boya.

Probable Assignee: SAITEC S A

Earliest Publication Date: 20140130

6) Family number: 51943838 (WO14013097A1)

© PatBase

SEMI-SUBMERSIBLE TRIANGULAR PLATFORM FOR USE IN THE OPEN SEA

Abstract: The invention relates to a semi-submersible platform (16) comprising: an inner column (15) designed to improve buoyancy and three outer columns (14), in which each of the inner and outer columns (14, 15) is made from reinforced **concrete** and comprises a resistant base (12), a shaft (5a, 5b, 6a, 6b) and a section (7) located at a pre-determined height and having greater resistance. The semi-submersible platform also comprises a plurality of beams (8) at the aforementioned pre-determined height, which connect each outer column (14) to the inner column (15) and to the other two outer columns, and a plurality of anchor lines (11) designed to be anchored to the more resistant section (7) of each outer column (14). The semi-submersible platform (16) also comprises a lower plate (9) on which the columns (14, 15) are secured and which is reinforced with a plurality of beams (13) that connect the base (12) of each outer column (14) to the base of the inner column (15) and to the base (12) of the other two outer columns. The invention relates to a method for the construction of a semi-submersible platform.

Probable Assignee: UNIV CANTABRIA

Earliest Publication Date: 20120920

7) Family number: 56440749 (ES2461065B)

© PatBase

ESTRUCTURA FLOTANTE PARA SOPORTE DE TURBINAS **EOLICAS** MARINAS Y PROCEDIMIENTO PARA SU CONSTRUCCION E INSTALACION

Abstract: Source: ES2461065B Estructura flotante para soporte de turbinas **eolicas** marinas y procedimiento para su construccion e instalacion. #La estructura flotante para soporte de turbinas **eolicas** marinas comprende una torre (1) que define una porcion superior (1a) donde se puede montar una turbina **eolica** y una porcion inferior (1b) que esta sumergida, al menos parcialmente, en el mar, y se caracteriza porque tambien comprende una plataforma de flotacion (2) formada de una sola pieza con dicha torre (1) y que esta formada alrededor de dicha porcion inferior (1b) de la torre. La invencion tambien se refiere al procedimiento para la construccion de dicha estructura y al procedimiento para su instalacion. #Permite sumar las ventajas del reducido coste del hormigon como material, una geometria sencilla y de facil ejecucion en dicho material y un calado suficientemente pequeno para poder instalar la estructura de acuerdo con la presente invencion en un amplio rango de profundidades: desde aguas intermedias hasta aguas profundas.

Probable Assignee: UNIV CATALUNYA POLITECNICA

Earliest Publication Date: 20140516

8) Family number: 50077691 (US2011299937A)

© PatBase

PRE-STRESSED **CONCRETE** FOUNDATION FOR A MARINE BUILDING STRUCTURE

Abstract: Source: US2011299937A A pre-stressed marine foundation includes a **concrete** base to be placed on a sea bed, a body placed over the **concrete** base, and a **concrete** platform. The body includes closed sections, each closed section composed of a pre-stressed **concrete** segmented column that has an upper extreme and a lower extreme joined at the base, and opened sections joined at sides of the closed sections, each open section composed of a structured beam frame. The **concrete** platform is joined at the upper extremes of the **concrete** columns.

Probable Assignee: CORTINA INNOVATIONS

Earliest Publication Date: 20111208

9) Family number: 59782605 (BRPI1004767A)

© PatBase

DISPOSITIVO FLUTUANTE, SISTEMA E UM METODO PARA DIRECIONAR, ELEVAR, CONDUZIR E CONSERVAR, ATE A ORLA COSTEIRA, O VOLUME DE MAIOR NIVEL OU ALTURA DO CAUDAL DAS AGUAS DAS ONDAS DO MAR **FLOATING** DEVICE, SYSTEM AND A METHOD FOR DIRECT, RAISE, AND LEAD TO STORE, ATE THE ORLA COAST, THE VOLUME LEVEL OF LARGER OR FLOW HEIGHT OF THE WATERS OF THE SEA WAVES (MACHINE TRANSLATION)

Abstract: Source: BRPI1004767A 1 RESUMO "DISPOSITIVO FLUTUANTE, SISTEMA E UM METODO PARA DIRECIONAR, ELEVAR, CONDUZIR E CONSERVAR, ATE A ORLA COSTEIRA, O VOLUME DE MAIOR NIVEL OU ALTURA DO CAUDAL DAS AGUAS DAS ONDAS DO MAR". 5 Dispositivo flutuante, sistema e metodo para direcionar, elevar, conduzir e conservar o volume de maior nivel ou altura do caudal das aguas das ondas ate a orla costeira, que compreende um corpo inferior do tipo chata protegido externamente por paredes verticais, uma parede inferior e uma parede superior que constitui o fundo do assoalho do dispositivo; um corpo superior que compreende paredes laterais 10 montadas em ambos os lados do corpo inferior do tipo chata, para, dessa forma, formar um canal de ondas, no qual o fundo ou assoalho do dispositivo, na sua extremidade distal ou extrema de alto mar, possui um active ou rampa de subida que, junto com a parede vertical da extremidade distal da chata se eleva e faz subir o nivel inferior das ondas captadas a partir do nivel de flutuacao que o dispositivo 15 flutuante (1), enquanto na sua extremidade proximal ou extrema da orla, o fundo ou assoalho do dispositivo possui uma parede frontal de igual altura das paredes laterais montadas em ambos os lados do corpo inferior do tipo chata. 1 SUMMARY "FLOATING DEVICE, SYSTEM AND A METHOD FOR DIRECT, RAISE, LEAD AND STORE, ATE The ORLA COAST, THE VOLUME LEVEL OF LARGER OR FLOW HEIGHT OF THE WATERS OF THE SEA WAVES." 5 floating device system and method for driving, raising drive and maintain the volume of higher level or height of flow of the waves waters to the shoreline which comprises a lower body of the flat type externally secured by vertical walls, a bottom wall and a top wall is the device floor background; an upper body comprising side walls 10 mounted on both sides of the lower body of the flat type, to thereby form a wave channel, in which the bottom or device floor, at its distal end or extreme high sea, has an active or rising ramp which, along with the vertical wall of the flat distal end rises, and raises the lower level of the waves picked up from the fluctuation level that the 15 floating device (1), while at its proximal end or extreme edge of the bottom or floor device has a front wall side walls of equal height mounted on both sides of the lower body of the flat type.

Probable Assignee: FONSECA ERNESTO RODOLFO WAGNER

Earliest Publication Date: 20150707

10) Family number: 52075985 (WO12131116A1)

© PatBase

FLOATING SUPPORT FOR INSTALLING A WIND TURBINE IN BODIES OF SEA WATER, LAKES AND RESERVOIRS, AND WIND TURBINE TOWER INCLUDING THE FLOATING SUPPORT

Abstract: The invention relates to a floating support for installing a wind turbine in a body of water (M). The invention comprises: an elongate lower body (1) which serves as a ballast, includes a first end portion (1a) and a second end portion (1b), and has an asymmetrical longitudinal section, the center of gravity of which is shifted towards the second end portion (1b); an upper body (2), to which the lower body is connected, serving as a float on which a wind turbine tower (3) can be mounted; and anchoring means (6, 7, 8) for anchoring the lower body (1) to the bottom of the body of water (M). According to the invention, the upper body (2) is vertically mounted in a mounting position close to the second end portion (1b), such that the lower body (1) has a main arm (1c) that extends the length of a longitudinal axis (EL) between the mounting position and the first end portion (1a) of the lower body (1), and has an axial axis (EA) that extends axially through the wind turbine tower (3). Moreover, the axial axis (EA) of the upper body (2) and the longitudinal axis (EL) of the main arm (1c) form an angle (a) of 90 plus or minus 10 degrees. In addition, the first end portion (1a) includes a mooring device (6) for mooring at least one mooring cable (7) that can be attached in a non-tensioned manner to a stationary anchor (8) on the bottom (F) of the body of water (M), allowing the support to orient itself towards the wind.

Probable Assignee: SARRASIN GOMEZ DAVID

Earliest Publication Date: 20121004

11) Family number: 57793293 (WO14181007A1)

© PatBase

FLOATING PLATFORM FOR OFFSHORE APPLICATIONS

Abstract: The invention relates to a spar-type floating platform (100) for characterising offshore wind resources, comprising a vertical column (13) formed by a lower part (2) and an upper part (4), in which the lower part (2) has a larger cross-section than the upper part (4). The platform (100) comprises: a housing (6) designed to house at least measuring equipment, said housing (6) being disposed on top of the upper part (4) of the vertical column (13) and having a larger cross-section than the upper part (4) of the vertical column (13); and a concrete mat (1) secured to the lower part (2) of the vertical column (13) and designed to increase the damping of the vertical movements and to confer stability on the assembly.

Probable Assignee: UNIV CANTABRIA

Earliest Publication Date: 20141113

12) Family number: 51891712 (WO12117135A1)

© PatBase

FLOATING STRUCTURE AND INSTALLATION FOR USING THE ENERGY OF THE SURGE OF THE WAVES, USING A FLOATING CATAMARAN WITH SEVERAL OSCILLATING WATER COLUMN CHAMBERS

Abstract: The invention relates to a floating structure for using the energy of the surge of the waves, said structure comprising a plurality of aligned independent oscillating water column (OWC) chambers that are open at the bottom, each chamber (1) communicating with the atmosphere through the top part via a turbogenerator group formed by an air conduit (14) containing a valve for controlling the air flow (16) and a self-rectifying air turbine (15) connected to an alternator (17).

Probable Assignee: UNIV CANTABRIA

Earliest Publication Date: 20120907

13) Family number: 50114932 (WO11154799A2)

© PatBase

PRE-STRESSED CONCRETE FOUNDATION FOR A MARINE BUILDING STRUCTURE

Abstract: It is described a pre-stressed marine foundation (10) consisting of (a) a concrete base (11), to be placed on the sea bed, (b) a body (12), that is placed over the concrete base (11) and that is composed of (i) closed sections (13), composed of pre-stressed concrete segmented columns (13a, 13b and 13c) that have an upper extreme and a lower extreme joined at the base (11); and (ii) opened sections (14), joined at the sides of the closed sections (13), and composed of structured beam frames (14a, 14b and 14c); and a concrete platform (15), joined at the upper extremes of the concrete columns.

Probable Assignee: CORTINA INNOVATIONS S A DE C V

14) Family number: 60649132 (ES2549367B)

© PatBase

PROCEDIMIENTO DE FABRICACION E IMPLANTACION DE UNA PLATAFORMA FLOTANTE MODULAR Y PLATAFORMA FLOTANTE MODULAR PARA LLEVAR A CABO EL PROCEDIMIENTO

Abstract: Source: ES2549367B Procedimiento de fabricacion e implantacion de una plataforma flotante modular y plataforma flotante modular para llevar a cabo el procedimiento que permite la fabricacion, transporte, ensamblase, preferentemente en una instalacion tipo dique seco, remolcado e instalacion de una plataforma flotante modular, preferentemente para aerogeneradores marinos de gran potencia, del tipo pendulo y su anclaje a unos pilotes de succion, dispuestos en el fondo marino, mediante cadenas. #La plataforma flotante modular tiene como elementos unitarios paneles estructurales interiores y paneles estructurales exteriores que al unirse generan unos prismas rectos hexagonales unitarios huecos que al unirse por sus caras laterales forman una estructura en nido de abeja. Los paneles estructurales interiores, exteriores y las uniones correspondientes son de hormigon armado.

Probable Assignee: MATIS HISPANIA S A

Earliest Publication Date: 20151027

15) Family number: 43087452 (ES2316211A)

© PatBase

SISTEMA DE MONTAJE DE ESTRUCTURAS ACUATICAS SOBRE UNA CIMENTACION DE ANCLAJE Y CIMENTACION DESTINADA PARA DICHO MONTAJE MOUNTING SYSTEM AQUATIC STRUCTURES ON A FOUNDATION FOUNDATION ANCHOR AND INTENDED FOR SUCH INSTALLATION (MACHINE TRANSLATION)

Abstract: Source: ES2316211A Sistema de montaje de estructuras acuaticas sobre una cimentacion de anclaje y cimentacion destinada para dicho montaje, construyendose la cimentacion, que consta de un bloque (3) de hormigon en forma de casquete, mediante hormigonado en un lugar portuario sobre un encofrado compuesto por una plataforma flotante anular (1), con la cual plataforma flotante (1) se lleva a cabo despues en transporte flotante el traslado del bloque (3) de la cimentacion hasta el lugar de instalacion en el mar, en donde desde la misma plataforma flotante (1) se realiza el descenso del bloque (3) hasta el fondo marino, sin necesidad de gruas accesorias.

Machine translation: Mounting system aquatic structures on a foundation and foundation anchor intended for mounting said, building foundations, consisting of a block (3) of cap-shaped **concrete** by concreting in a port on one formwork compound by a **floating** ring (1), with which **floating** platform (1) is carried out in **floating** transport after transfer of the block (3) of the foundation to the place of installation at sea, where from the same platform **floating** (1) is performed drop block (3) to the seabed, cranes without ancillary.

Probable Assignee: TORRES MARTINEZ M

Earliest Publication Date: 20090401

16) Family number: 54553203 (WO13117796A1)

© PatBase

METHOD FOR THE INSTALLATION AND MAINTENANCE OF A MONOLITHIC **FLOATING** STRUCTURE FOR SUPPORTING A WIND TURBINE

Abstract: The invention relates to a method for installing and maintaining a monolithic **floating** structure for supporting a wind turbine in a maritime area which is very deep and far from the coast, wherein the installation consists in the anchoring of the structure (11) from a horizontal transport position to a vertical position by means of the controlled flooding of the interior thereof, in such a way that the section emerging above the sea surface is minimal, in order to perform the installation of the wind turbine be carried out by means of a catamaran-style ship. The maintenance comprises the replacement or removal of the wind turbine and other elements supported by the **floating** structure (11) by causing a vertical descent of the **floating** structure (11) until a maximum height above the average sea level of 20m is attained, by means of the controlled flooding of the interior thereof, and carrying out a process of causing the **floating** structure (11) to emerge by means of removing the water from the interior thereof.

Probable Assignee: UNIV CATALUNYA POLITECNICA

Earliest Publication Date: 20130815

17) Family number: 61913210 (WO16042173A1)

© PatBase

GRAVITY FOUNDATION FOR THE INSTALLATION OF **OFFSHORE** WIND TURBINES AND METEOROLOGICAL TOWERS

Abstract: The invention relates to a gravity foundation for the installation of **offshore** wind turbines and meteorological towers, produced on a **floating** dock to be towed to its final location, where it is sunk, ultimately remaining entirely submerged below the level of the sea. The gravity foundation comprises a **floating concrete** box (1) in the form of a straight prism with rectangular bases, provided with internal vertical cells (6) connected to one another and to the exterior, said cells being provided with emptying and filling devices permitting the self-regulation of the level of ballast for sinking at its final location, which box is closed on top using a slab (2) that covers the entire surface of the box (1) with the exception of at least one cell (61) in which a **concrete** node (3) is formed in which a shaft (4) or a support structure (7) is fixed, joining the box (1) to the superstructure (5) on which the wind turbine or meteorological tower is then secured.

Probable Assignee: DRACE INFRAESTRUCTURAS S A

Earliest Publication Date: 20160324

18) Family number: 65386490 (ES2608504B)

© PatBase

ESTRUCTURA FLOTANTE AUTOINSTALABLE DE TIPO SPAR PARA SOPORTE DE AEROGENERADORES DE GRAN POTENCIA

Abstract: Source: ES2608504B Estructura flotante de tipo Spar que sirve como base para aerogeneradores off-shore de gran tamaño constituida por un cajon triangular inferior de hormigon armado, y otro superior metalico, tambien triangular, sobre el que apoya el fuste del aerogenerador, unidos mediante tres columnas elevables, dispuestas en los vertices. #La estructura propuesta, pertenece a la tipologia de las plataformas Spar, por basar fundamentalmente su funcionamiento en el descenso del centro de gravedad del conjunto, pero tiene tambien componentes de semisumergible por tener tres flotadores en la linea de flotacion que aumentan su par restaurador. #Su bajo calado inicial (en torno a los 10 m), aumenta notablemente la disponibilidad de muelles cercanos al lugar de implantacion para su construccion y montaje. Por otra parte, la sencilla geometria de su base, permite realizarse mediante un sistema de construccion sencillo y eficaz, similar al empleado para la elaboracion de cajones portuarios. #Tiene un sistema innovador de puesta en servicio del tanque de lastrado que permite remolcar la estructura con el aerogenerador completamente instalado "on-shore" con gran estabilidad naval, y una vez llegado a su posicion de trabajo, sin la necesidad de empleo de ningun medio de elevacion auxiliar (Jack-up, gruas heavylift), se lastra solo con agua y se desciende a gran profundidad asegurando significativas menores inclinaciones para el correcto funcionamiento del aerogenerador. #A diferencia de otros sistemas Spar existentes, el tanque de lastrado es izable y reflotable y permite remolcar de nuevo la plataforma con el aerogenerador, para poder hacer labores de reparacion o mantenimiento en puerto.

Probable Assignee: BERENGUER INGENIEROS S L

Earliest Publication Date: 20170411

19) Family number: 67279394 (ES2638011A)

© PatBase

CIMENTACION POR GRAVEDAD PARA LA INSTALACION DE AEROGENERADORES OFFSHORE Y TORRES METEOROLOGICAS. FOUNDATION FOR THE INSTALLATION OF OFFSHORE WIND TURBINES BY GRAVITY AND METEOROLOGICAL TOWERS. (MACHINE TRANSLATION)

Abstract: Source: ES2638011A Cimentacion por gravedad para la instalacion de aerogeneradores offshore y torres meteorologicas, fabricada en un dique flotante para ser remolcada a su lugar de ubicacion definitiva, donde se fondea quedando finalmente totalmente sumergida debajo del nivel del mar, comprendiendo un cajon autoflotante (1) de hormigon, con forma de prisma recto de bases rectangulares, provisto de celdas verticales interiores (6) interconectadas entre si y con el exterior, dotadas de dispositivos de vaciado y llenado que permite la autorregulacion del nivel de lastrado para el fondeo en su ubicacion final; el cual se cierra superiormente mediante una losa (2) que abarca toda la superficie del cajon (1) a excepcion de al menos una celda (61) en la que se forma un nudo de hormigon (3) en el que se fija un fuste (4) o una estructura soporte (7), que une el cajon (1) con la superestructura (5) en la que se fija a su vez el aerogenerador o una torre meteorologica. Foundation for the installation of offshore wind turbines by gravity and meteorological towers, made of a floating dock to be towed to their place of final location, where fondea finally being fully submerged below the sea level, comprising a drawer (1) of concrete, autoflotante shaped prism of rectangular bases, provided with vertical cells (6) interconnected and with the outside, drain and fill devices that allows self-regulation of the level of ballasting for anchoring in its final location, which is closed superiorly by a slab (2) covering the whole surface of the drawer (1) with the exception of at least one cell (61) in which is formed a knot Concrete (3) in which is fixed a shaft (4) or a support structure (7) connecting the drawer (1) with the superstructure (5) in which is fixed to turn the wind turbine or a meteorological tower.

Probable Assignee: DRACE INFRAESTRUCTURAS S A

Earliest Publication Date: 20171018

20) Family number: 66159960 (ES2617991B)

© PatBase

ESTRUCTURA MARITIMA PARA LA CIMENTACION POR GRAVEDAD DE EDIFICACIONES, INSTALACIONES Y AEROGENERADORES EN EL MEDIO MARINO

Abstract: Source: ES2617991B Estructura maritima para la cimentacion por gravedad de edificaciones, instalaciones y aerogeneradores en el medio marino. #La estructura presenta grandes ventajas para su construccion, transporte, puesta en posicion y operacion, gracias a las novedades que introduce en su disenio frente a otros tipos existentes. #Consta de una base con forma triangular equilateral acaflanada, de altura suficiente para optimizar la navegabilidad, compuesta por una trama de paramentos verticales que forman celdas hexagonales o triangulares, que se cierran en sus extremos por una losa inferior y otra superior, y tres torres cerradas de seccion hexagonal regular o circular, situadas en sus vertices. #La estructura es remolcable con el aerogenerador, o superestructura que soporta, completamente instalada, con bajo calado inicial, gran estabilidad naval y baja resistencia al desplazamiento. Su proceso de fondeo se realiza mediante el lastrado por gravedad de sus celdas con agua de mar, sin necesidad de ningun medio adicional, ni embarcaciones auxiliares de grandes capacidades, ni de elementos de flotacion ajenos a la estructura en si. Puede ser ubicada como cimentacion de gravedad desde los 20, hasta los 50 metros de profundidad, y para su desmantelamiento puede ser reflotada para su traslado integro de nuevo a puerto.

Probable Assignee: BERENGUER INGENIEROS S L

Earliest Publication Date: 20170620

21) Family number: 63003097 (ES2578429B)

© PatBase

DISPOSITIVO FLOTANTE OFFSHORE DE ACUICULTURA PARA EL CULTIVO DE DIVERSAS ESPECIES DE PECES

Abstract: Source: ES2578429B Dispositivo flotante de acuicultura para el cultivo de diversas especies de peces en mar abierto, que comprende: #- dos cilindros huecos (1, 2) de igual radio interior y diferente radio exterior, de tal forma que la pared interior de ambos cilindros huecos (1, 2) esta contenida en el mismo plano; #- una placa de reduccion y amortiguacion de arfada (3) unida a lo largo de todo el perimetro exterior de la base del cilindro hueco inferior (1); #- una red de contencion de especies de peces (6), que se conecta en un extremo a la parte inferior del cilindro hueco inferior (1) y en el extremo restante a un lastre (4); #- un lastre (4) con forma de toroide, cuyo radio primario es igual al radio de la red de contencion de especies de peces (6); #- una pluralidad de tensores (5) situados en la parte inferior del cilindro hueco inferior (1) configurados para unir el lastre (4) y dicho cilindro hueco inferior (1).

Probable Assignee: FUND IH DE CANTABRIA

Earliest Publication Date: 20160726

22) Family number: 63046961 (ES2578927B)

© PatBase

GENERADOR ELECTRICO NEUMATICO OSCILANTE

Abstract: Source: ES2578927B Un deposito cilindrico acostado presenta, interiormente en sus cuadrantes superiores, dos camaras llenas de aire, constituidas por una pared radial tendente a la verticalidad, solidaria a las paredes del deposito, y otra libre, tendente a una permanente horizontalidad y establecida por la superficie de un fluido o por una masa pendular semicilindrica, con radio ligeramente inferior al interior del deposito y con eje de giro concentrico a este; estas paredes forman entre si angulos suplementarios variables. Cuando el deposito gira sobre su eje, parcial y alternativamente en ambos sentidos, las camaras cambian su geometria al inclinarse la pared radial, generandose un flujo bidireccional de aire por una tuberia que las comunica, donde se conecta un motor neumatico que arrastra a generador electrico. El giro del deposito se obtiene de un movimiento rectilineo-alternativo, vertical, generado por las olas, el viento o una corriente de agua, mediante diversos mecanismos de transmision.

Probable Assignee: JOSE RAMON FUENTES ESTEBAN

Earliest Publication Date: 20160802

23) Family number: 60685881 (PT107474A)

© PatBase

**PLATAFORMA CONICA FLUTUANTE EM BETAO PARA A GERACAO DE ENERGIA EOLICA EM MARES PROFUNDOS
CONICA DECK FLOATING IN CONCRETE FOR POWER GENERATION EOLICA IN DEEP SEAS
(MACHINE TRANSLATION)**

Abstract: Source: PT107474A A INVENCAO E UM NOVO TIPO DE ESTRUTURA FLUTUANTE ADEQUADA AO SUPORTE DE APLICACOES COM FORTES SOLICITACOES HORIZONTAIS, COMO E O CASO DOS GERADORES DE ENERGIA EOLICA. O PRINCIPAL MATERIAL ESTRUTURAL DA PLATAFORMA E O BETAO ARMADO E ELA E PROJECTADA DE MODO A SE GARANTIR QUE ESTE BETAO ESTARA SEMPRE SOB COMPRESSAO E COMPLETAMENTE IMERSO. A PLATAFORMA E APTA A SER FUNDEADA EM MARES PROFUNDOS. ELA E COMPOSTA ESPECIALMENTE POR UM CONE ALONGADO INVERTIDO (1), DISPOSTO NA VERTICAL E COM OS CANTOS ARREDONDADOS. NO INTERIOR DESTA ENCONTRA-SE UM SISTEMA DE DISTRIBUICAO DAS CARGAS (2) QUE GARANTE A COMPLETA COMPRESSAO DAS PAREDES DE BETAO. NO TOPO DA PLATAFORMA E COLOCADO O GERADOR EOLICO (3). NA BASE DA PLATAFORMA EXISTE UMA TRELICA TRIDIMENSIONAL (4) EM ACO QUE E USADA PARA LIGAR A PLATAFORMA AOS CABOS DE ANCORAGEM (5). The invention is a NEW KIND OF FLOATING STRUCTURE APPROPRIATE TO SUPPORT APPLICATIONS WITH STRONG HORIZONTAL requests, HOW AND THE CASE OF wind power generators. THE MAIN MATERIAL STRUCTURAL DECK AND CONCRETE REINFORCING AND SHE AND PROPOSED IN ORDER TO ENSURE THAT THIS IS CONCRETE WILL BE ALWAYS UNDER COMPRESSION AND COMPLETELY IMMERSED. PLATFORM AND FIT TO BE anchored IN DEEP SEAS. SHE AND ESPECIALLY FOR A COMPOSITE CONE EXTENDED REVERSE (1) PROVISIONS OF VERTICAL AND WITH ROUNDED CORNERS. INSIDE THIS LIES A DISTRIBUTION OF FREIGHT SYSTEM (2) TO GUARANTEE THE FULL COMPRESSION OF CONCRETE WALLS. AT THE TOP DECK AND PUT WIND GENERATOR (3). EXIST IN PLATFORM BASE a trellis DIMENSIONAL (4) IN STEEL AND THAT USED TO SWITCH ON THE PLATFORM TO ANCHOR CABLES (5).

Probable Assignee: ABREU MIGUEL MARINHO MENDES

Earliest Publication Date: 20150821

24) Family number: 62881872 (ES2576792B)

© PatBase

FORMA DEL CASCO DE UNA PLATAFORMA ASIMETRICA FLOTANTE, PARA ZONAS MARINAS DE CUALQUIER PROFUNDIDAD

Abstract: Source: ES2576792B Plataforma flotante (1) que se caracteriza porque su centro de carena (2) (centro de gravedad del volumen sumergido (3), en condiciones de operacion normales) no esta situado en la misma vertical que el centro de la flotacion (4) (centro de gravedad de la seccion (5) que resulta de cortar la plataforma por el plano de la superficie del mar), sino que esta adelantado hacia proa (direccion desde la que llegan las olas (6)) una distancia (7) comprendida entre el 2 percent y el 10 percent de su eslora (8).#Es aplicable solo a artefactos marinos flotantes sin sistema de propulsion propia, y que estan disenados para operar al menos el 80 percent de su vida util fondeados, es decir unidos al fondo mediante sistemas elasticos permanentes (9) (cables, cadenas, etc.).#Quedan excluidas, las plataformas marinas que tienen simetria radial (respecto a un eje vertical), las que tienen simetria respecto al algun plano transversal, las que se apoyan en el fondo marino, todos los buques autopropulsados y todas las barcasas remolcables.

Probable Assignee: GARCIA FERRANDEZ ANTONIO LUIS

Earliest Publication Date: 20160711

25) Family number: 31833573 (ES2226522B)

© PatBase

SISTEMA ROTATIVO FLOTANTE, ESPECIALMENTE DISENADO PARA USO EN INSTALACIONES DE GENERACION ELECTRICA EN MEDIO HIDRAULICO TERRESTRE Y MARINO

Abstract: Source: ES2226522B Sistema Rotativo Flotante, especialmente para uso en instalaciones de generacion electrica en medio hidraulico terrestre y marino. Sistema Rotativo Flotante, especialmente disenado para uso en instalaciones de generacion electrica en medio hidraulico terrestre y marino, caracterizado porque la potencia desarrollada por el sistema se capta en la periferia de la parte rotativa y flotante (1) mediante cuchillas giratorias autoamortiguantes o fijas con posibilidad de ser partidas (2) y que envia la potencia captada por medio de bombas de transporte fluido (9) o por cualquier otro medio hasta el motor (15), que a su vez acciona un sistema de generacion electrica (16) posibilitando la alimentacion de redes de distribucion electrica, sistemas de almacenamiento u otras demandas energeticas con energia continua o alterna, con flotabilidad controlada mediante el mecanismo (11), autoadaptable a las condiciones del entorno y de seguridad intrinseca de hundimiento y rigidizacion mediante los rodamientos (12), (13) y (14), y que puede estar unida al fuste (4) a traves del soporte (3), amarrado con palancas rigidas o telescopicas (7) a la lamina (6), unida a la cimentacion (8) o a otro enclavamiento con soportes (10), y que puede disponer de una proteccion apantallada (5).

Probable Assignee: ESCUDERO LOPEZ JOSE MARIA

Earliest Publication Date: 20050316

26) Family number: 59898467 (WO15107236A1)

© PatBase

THERMAL ENERGY ACCUMULATOR AND USES

Abstract: The invention relates to a waterproofed closed-configuration accumulator made of specific solid and liquid materials. The solid materials can be stone, ceramic, **concrete**, slag, etc., refractory, having a high temperature coefficient, in pervious, granular parts, and the liquid materials are mainly water, which firstly are heated by electric elements and the circulation of hot gases and steam, from a variety of conventional external energy sources, and secondly transfer heat in a closed circuit to a fluid, mainly steam, as a direct transmitter to industrial and domestic hot air and water services, and indirectly to endothermic turbines that transform heat into all types of mechanical work and network connections. The invention also relates to stirrers and friction discs in the energy source which supply hot steam to the aforementioned processes. The use thereof in continuous and intermittent generators enables continuous and intermittent supply as required.

Probable Assignee: GONZALEZ PEREZ ADOLFO

Earliest Publication Date: 20150723

27) Family number: 68729419 (WO18037141A1)

© PatBase

SUBMERSIBLE **FLOATING** WORK OR STORAGE PLATFORM

Abstract: The invention relates to a submersible **floating** work or storage platform which comprises a hybrid structure of steel or **concrete** and polymer materials in the form of bags that have variable volume and a design and behaviour similar to bellows. The platform is intended to act as a base for operations on calm waters, for example, to build marine structures of large dimensions and weights, thereby facilitating the placement thereof in the sea, or to store loads, mainly when same are variable in time and/or space. The platform is a modular system comprising air distribution and compression systems and a control system, each of the bellows-bags having a simple and easily controllable system for air filling and discharge, which allows each bellows-bag to have a pressure suitable for adjusting to the load.

Probable Assignee: CLECOSER S L

Earliest Publication Date: 20180301

28) Family number: 44515882 (US2011158750A)

© PatBase

OFFSHORE STATION, FOUNDATION FOR AN **OFFSHORE** STATION, AND METHOD FOR BUILDING AN **OFFSHORE** STATION

Abstract: Source: US2011158750A An **offshore** station (1), in particular an **offshore** wind power station, comprises a **floatable** foundation (2) that can be sunk by flooding a hollow chamber, and a superstructure (6) on which functional units (7, 8) of the station (1) are arranged. The foundation (2) includes a bottom plate (3), a base (4) which is disposed on the bottom plate (3) and projects from the water surface (12) in the sunk state of the foundation (2) and on which the superstructure (6) can be mounted, and a floodable **floating** device (5) which surrounds the base (4) in the shape of a ring. In a method for building an **offshore** station (1), in particular an **offshore** wind power station, a **floatable** foundation (2) is prefabricated in a harbor zone, is towed to a mounting location after being prefabricated and is sunk, whereupon the station (1) is completed with a superstructure (6) and functional units (7, 8) of the station at the mounting location. In the harbor zone, a bottom plate (3) of the foundation (2) is **concreted**, a base (4) of the superstructure (6) preferably made of prefabricated **concrete** parts (15) is mounted on the bottom plate (3), and a floodable **floating** device (5) which surrounds the base (4) in the shape of a ring is mounted on the bottom plate (3) and/or the base (4) once the base (4) has been mounted.

Probable Assignee: MAX BOGL BAUUTERNEHMUNG GMBH CO KG

Earliest Publication Date: 20100311

29) Family number: 68729418 (WO18037140A1)

© PatBase

MULTIPLE-USE MODULAR FLEXIBLE POLYMER SYSTEM

Abstract: The invention relates to a system based on complex bags of polymer material that **float** horizontally and are joined together to form modules which are in turn joined together. The system is suitable for constructing installations on water which require large surfaces, but with relatively smaller loads that do not vary significantly over time and are uniformly distributed on the entire surface, the installations having a functionality that is not particularly sensitive to the movement caused by waves. The surface can be submerged at will in adverse wind or sea conditions, and the installations must therefore withstand periods of immersion lasting hours or days. Those components or devices that cannot withstand immersion must be located on smaller auxiliary platforms designed with different principles and which are not the subject matter of the invention.

Probable Assignee: CLECOSER S L

Earliest Publication Date: 20180301

30) Family number: 54702685 (ES1089231Y)

© PatBase

GENERADOR ELECTRICO ALIMENTADO POR FUERZAS INDEPENDIENTES (TURBINAS PARA CAPTACION DE ENERGIAS DE DISTINTO SENTIDO)

Abstract: Source: ES1089231U 1. Generador electrico alimentado por fuerzas independientes (turbinas para captacion de energias de distinto sentido), caracterizado por tener: a) al menos dos turbinas o similares (1,2). b) uno o mas dispositivos de multiplicacion y/o reduccion de velocidad y/o fuerza, cuando se precise. c) los medios de transmision cuando sean necesarios, por ejemplo: cadenas, poleas, pinones, arbol de transmision, correas de transmision, ruedas dentadas, etcetera. d) los medios de regulacion, estabilizacion, adaptacion y proteccion de la corriente electrica a la red publica o privada, por ejemplo: fusibles, transformador, rectificador, dinamo, inversor (12), etcetera, los conductores electricos necesarios, cuando se precise. e) al menos un motor. f) at menos un generador electrico (3). g) al menos un dispositivo de acoplamiento unidireccional (7) por elemento motriz, por ejemplo: poleas, pinones, etcetera, con rodamiento libre o similar. h) uno o varios medios de activacion y desactivacion mecanicos o electromecanicos, cuando se precise, por ejemplo: un interruptor para el motor o un freno para las turbinas. 2. Generador electrico alimentado por fuerzas independientes (turbinas para captacion de energias de distinto sentido), segun reivindicacion 1, caracterizado porque los dispositivos de acoplamiento unidireccional estan situados en un arbol de transmision o en un eje (6), que estara acoplado al eje del generador electrico. 3. Generador electrico alimentado por fuerzas independientes (turbinas para captacion de energias de distinto sentido), segun reivindicacion 1, caracterizado porque los dispositivos de acoplamiento unidireccional estan situados en cada uno de los ejes (4) o ejes de transmision (17) de cada uno de los elementos motrices. 4. Generador electrico alimentado por fuerzas independientes (turbinas para captacion de energias de distinto sentido), segun reivindicaciones 1 a la 3, caracterizado porque los elementos motrices, por ejemplo: turbinas (1 y 2), motores, etcetera, estan vinculados entre ellos de forma coaxial. 5. Generador electrico alimentado por fuerzas independientes (turbinas para captacion de energias de distinto sentido), segun reivindicaciones 1 a la 3.

caracterizado porque los elementos motrices, por ejemplo: turbinas, motores, etcetera, estan vinculados entre ellos de forma paralela. 6. Generador electrico alimentado por fuerzas independientes (turbinas para captacion de energias de distinto sentido), segun reivindicaciones 1 a la 3, caracterizado porque los elementos motrices, por ejemplo: turbinas, motores, etcetera, estan vinculados entre ellos de forma mixta. 7. Generador electrico alimentado por fuerzas independientes (turbinas para captacion de energias de distinto sentido), segun reivindicaciones 1 a la 3, caracterizado porque los elementos motrices, por ejemplo: turbinas, motores, etcetera, estan vinculados entre ellos, en serie. 8. Generador electrico alimentado por fuerzas independientes (turbinas para captacion de energias de distinto sentido), segun reivindicaciones anteriores, caracterizado porque los grupos de turbinas (A y B) estan dispuestos entre ellos de forma paralela, mixta, etcetera. 9. Generador electrico alimentado por fuerzas independientes (turbinas para captacion de energias de distinto sentido), segun reivindicaciones anteriores, caracterizado porque carece de generador electrico (3) ya que su funcion es la produccion de movimiento. 10. Generador electrico alimentado por fuerzas independientes (turbinas para captacion de energias de distinto sentido), segun reivindicaciones anteriores, caracterizado porque no tiene motor. 11. Generador electrico alimentado por fuerzas independientes (turbinas para captacion de energias de distinto sentido), segun reivindicaciones anteriores, caracterizado porque no tiene turbinas (1 y 2). 12. Generador electrico alimentado por fuerzas independientes (turbinas para captacion de energias de distinto sentido), segun reivindicaciones anteriores, caracterizado porque tiene bateria o dispositivos similares. 13. Generador electrico alimentado por fuerzas independientes (turbinas para captacion de energias de distinto sentido), segun reivindicaciones anteriores, caracterizado porque es utilizado en combinacion al menos con un aerogenerador. 14. Generador electrico alimentado por fuerzas independientes (turbinas para captacion de energias de distinto sentido), segun reivindicaciones anteriores, caracterizado porque las turbinas utilizadas pueden estar combinadas para aprovechar dos fuentes de energia, por ejemplo, utilizando una turbina marina sumergida (1 y 2) y una turbina **eolica** (18). 15. Generador electrico alimentado por fuerzas independientes (turbinas para captacion de energias de distinto sentido), segun reivindicaciones anteriores, caracterizado porque al menos uno de los elementos motrices citados puede sustituirse por al menos un elemento undimotriz. 16. Generador electrico alimentado por fuerzas independientes (turbinas para captacion de energias de distinto sentido), segun reivindicaciones anteriores, caracterizado porque al menos un medio de captacion mareomotriz. 17. Generador electrico alimentado por fuerzas independientes (turbinas para captacion de energias de distinto sentido), segun reivindicaciones anteriores, caracterizado porque puede llevar una estructura o no llevarla. Dicha estructura puede ser fija o movil, por ejemplo, una estructura de hormigon, una estructura flotante, etcetera. 18. Generador electrico alimentado por fuerzas independientes (turbinas para captacion de energias de distinto sentido), segun reivindicaciones anteriores, caracterizado porque permite la utilizacion de un segundo generador electrico por cada grupo de turbinas. 19. Generador electrico alimentado por fuerzas independientes (turbinas para captacion de energias de distinto sentido), segun reivindicacion 18, caracterizado porque dicho generador esta acoplado mediante un dispositivo de acoplamiento secuencial, que puede ser electromecanico. 20. Generador electrico alimentado por fuerzas independientes (turbinas para captacion de energias de distinto sentido), segun reivindicaciones anteriores, caracterizado porque el eje al que estan adaptados los elementos motrices mueve el estator o el rotor. 21. Generador electrico alimentado por fuerzas independientes (turbinas para captacion de energias de distinto sentido), segun reivindicaciones anteriores, caracterizado porque las turbinas son de tipo vertical. 22. Generador electrico alimentado por fuerzas independientes (turbinas para captacion de energias de distinto sentido), segun reivindicaciones anteriores, caracterizado porque combina turbinas de tipo horizontal con turbinas de tipo vertical ya sean marinas o **eolicas**. 23. Generador electrico alimentado por fuerzas independientes (turbinas para captacion de energias de distinto sentido), segun reivindicaciones anteriores, caracterizado porque dispone de un dispositivo electromecanico o mecanico de giro de orientacion de las turbinas. 24. Generador electrico alimentado por fuerzas independientes (turbinas para captacion de energias de distinto sentido), segun reivindicaciones anteriores, caracterizado porque dispone de un dispositivo mecanico o electromecanico de regulacion de altura de la estructura. 1. Electric generator powered by independent forces (turbines for different energies uptake of sense), characterized by having: a) at least two turbines or similar (1,2). b) one or more devices multiplication and / or reducing speed and / or strength, when required. c) means of transmission when needed, eg chains, pulleys, sprockets, tree transmission, transmission belts, sprockets, etcetera. d) means of regulation, stabilization, adaptation and protection of electric current to the public or private network, for example, fuses, transformer, rectifier, generator, inverter (12), and so on, necessary electrical conductors, where required. e) at least one motor. f) at least one electric generator (3). g) at least one unidirectional coupling device (7) for driving element, eg pulleys, sprockets, and so on, free bearing or similar. h) one or more modes of activation and deactivation mechanical or electromechanical, when required. i) at least one device turned off or mechanical or electromechanical braking, when required, for example: a switch for motor or a brake on the turbines. Two. Electric generator powered by independent forces (turbines for different energies uptake of sense) according to claim 1, wherein the unidirectional coupling devices are located in a tree or on a transmission shaft (6), which will be coupled to the generator shaft electric. Three. Electric generator powered by independent forces (turbines for uptake of different energies direction) according to claim 1, wherein the unidirectional coupling devices are located in each of the axes (4) or transmission shaft (17) of each of drive elements. April. Electric generator powered by independent forces (turbines for different energies uptake of sense), according to claims 1 to 3 wherein the drive elements, eg turbines (1 and 2), engines, and so on, are linked together to form coaxial. May. Electric generator powered by independent forces (turbines for different energies uptake of sense), according to claims 1 to 3 wherein the drive elements, eg turbines, engines, and so on, are linked together in parallel. June. Electric generator powered by independent forces (turbines for different energies uptake of sense), according to claims 1 to 3 wherein the drive elements, eg turbines, engines, and so on, are linked together in a mixed way. July. Electric generator powered by independent forces (turbines for different energies uptake of sense), according to claims 1 to 3 wherein the drive elements, eg turbines, engines, and so on, are linked together in series. August. Electric generator powered by independent forces (turbines for different energies uptake of sense), according to previous claims, wherein the turbine groups (A and B) are arranged in parallel with each other, mixed, etcetera. 9. Electric generator powered by independent forces (turbines for different energies uptake of sense), according to previous claims, characterized in that it lacks electric generator (3) because its function is the production of movement. 10. Electric generator powered by independent forces (turbines for different energies uptake of sense), according to previous claims, characterized in that it has no engine. 11. Electric generator powered by independent forces (turbines for different energies uptake of sense), according to previous claims, characterized in that no turbines (1 and 2). 12. Electric generator powered by independent forces (turbines for different energies uptake of sense), according to previous claims, characterized by battery or similar devices. 13. Electric generator powered by independent forces (turbines for different energies uptake of sense), according to previous claims, characterized in that it is used in combination with at least one wind turbine. 14. Electric generator powered by independent forces (turbines for different energies uptake of sense), according to previous claims, characterized in that the turbines used can be combined to take advantage of two power sources, for example, using a submerged marine turbine (1 and 2) and A wind turbine (18). 15. Electric generator powered by independent forces (turbines for uptake of different energies sense), according to previous claims, wherein at least one of said drive elements can be replaced by at least one wave element. 16. Electric generator powered by independent forces (turbines for uptake of different energies sense), according to previous claims, wherein at least one of said drive elements can be replaced by at least one means of capturing tidal. 17. Electric generator powered by independent forces (turbines for different energies uptake of sense), according to previous claims, characterized in that a structure can take or not take. This structure can be fixed or mobile, for example, a **concrete** structure, a **floating** structure, etcetera. 18. Electric generator powered by independent forces (turbines for different energies uptake of sense), according to previous claims, characterized in that it allows the use of a second generator electric turbines for each group. 19. Electric generator powered by independent forces (turbines for different energies uptake of sense), according to claim 18, wherein said generator is coupled by a sequential coupling device, which can be electromechanical. 20. Electric generator powered by independent forces (turbines for different energies uptake of sense), according to previous claims, characterized in that the axis to which the elements are adapted motor moves the stator or rotor. 21. Electric generator powered by independent forces (turbines for different energies uptake of sense), according to previous claims, characterized in that the turbines are vertical type. 22. Electric generator powered by independent forces (turbines for different energies uptake of sense), according to previous claims, characterized in that it combines horizontal type turbines with vertical type turbines either marine or windmills. 23. Electric generator powered by independent forces (turbines for different energies uptake of sense), according to previous claims,

characterized in that it has a mechanical or electromechanical device rotational orientation of the turbines. 24. Electric generator powered by independent forces (turbines for different energies uptake of sense), according to previous claims, characterized in that it has a mechanical or electromechanical device for regulating height of the structure.

Probable Assignee: RODRIGUEZ RAMIREZ MARCO ANTONIO

Earliest Publication Date: 20130905

31) Family number: 60336348 (US2017356423A)

© PatBase

FLOATING PLATFORM FOR HARNESSING WIND ENERGY

Abstract: Source: US2017356423A The invention relates to a **floating** platform for harnessing wind energy, comprising a tower (1) with a wind turbine (2), and two horizontal, identical cylindrical **floating** elements (3) parallel to the main longitudinal axis of alignment, the tower and the **floating** elements being interconnected by bar structures (5). The **floating** elements are joined to a stabilising element (4) which is situated directly beneath the **floating** elements (3), said stabilising element comprising two substantially rectangular first **concrete** slabs (4a), which are solid or more lightweight, with a ribbed structure, arranged perpendicularly to the axes of the **floaters** and joined to said **floaters** by means of auxiliary structures.

Probable Assignee: SAITEC OFFSHORE TECHNOLOGIES SLU

Earliest Publication Date: 20150911

32) Family number: 68729416 (WO18037139A1)

© PatBase

FOUNDATION FOR FLOATING WIND TURBINES

Abstract: Foundation for **floating** wind turbines, comprising one or more structures built with light materials and characterised in that they use bags of polymeric materials that can be inflated at will with fluids that are heavier or lighter than sea water, thus regulating floatability in order to achieve equilibrium of the assembly at all times (see Fig. 1). The use of polymeric materials in bags that can be filled or emptied at will with fluids of different densities, at different times and operation modes, incorporated within a light structure/s provides great advantages both regarding cost and safety of the construction, transport, installation and operation of the foundation-wind turbine assembly as well as the possibility of uninstalling same and transporting it to port for major maintenance or repairs.

Probable Assignee: CLECOSER S L

Earliest Publication Date: 20180301

33) Family number: 57428963 (ES2496390B)

© PatBase

ESTRUCTURA DE CIMENTACION PARA AEROGENERADORES EN EL MAR

Abstract: Source: ES2496390B Estructura de cimentacion para aerogeneradores en mar; que comprende: - una pieza central (1) de hormigon, hueca, conformante de un soporte flotante para una torre metalica de sustentacion de un aerogenerador (A); - al menos tres flotadores (2) de hormigon distribuidos uniformemente alrededor de la pieza central (1); - unas vigas (3) unidas por sus extremos a dicha pieza central (1) y a los correspondientes flotadores (2) mediante unas articulaciones (31, 32) adecuadas para permitir su abatimiento entre una posicion de flotacion y transporte de la estructura, y una posicion inclinada de fondeo de la estructura sobre el fondo marino; y ? unos tirantes (4) desmontables fijados a la pieza central (1) y a los respectivos flotadores (2) de hormigon, impidiendo en el abatimiento de las vigas (3) durante el transporte de la estructura en flotacion.

Probable Assignee: INGECID INVESTIGACION Y DESARROLLO DE PROYECTOS S L

Earliest Publication Date: 20140918

34) Family number: 60974596 (PT107606A)

© PatBase

PLATAFORMA FLUTUANTE ESTABILIZADA POR AMARRACOES TENSIONADAS PARA GERADOR DE ENERGIA EOLICA COM FLUTUADORES DE BETAO ARMADO E CAMARA DE AMARRACAO VISITAVEL FLOATING PLATFORM IN STABILIZED MOORINGS TENSIONED FOR GENERATOR EOLICA ENERGY WITH CONCRETE REINFORCING OF FLOATS AND MOORING CAMARA VISITABLE (MACHINE TRANSLATION)

Abstract: Source: PT107606A A INVENCAO E UM NOVO TIPO DE PLATAFORMA FLUTUANTE ESTABILIZADA POR AMARRACOES (2) TENCIONADAS PARA SUPORTE A GERADOR DE ENERGIA EOLICA A INSTALAR NO MAR. ELA AMARRACIA-SE POR A SOLUCAO ESTRUTURAL GARANTIR QUE OS FLUTUADORES (1) SE ENCONTRAM SEMPRE COMPRIMIDOS POR FORCAS EXTERNAS E SEMPRE SUBMERSOS, PODENDO-SE ASSIM UTILIZAR NA SUA CONSTRUCAO UM MATERIAL ECONOMICO COMO O BETAO ARMADO. PARA GARANTIR ISTO AS AMARRACOES (2) ATRAVESSAREM OS FLUTUADORES LIGANDO A ESTRUTURA ACIMA DESTES, CRIANDO-SE ASSIM DESTE MODO NA CAMARA DE AMARRACAO (3) UMA BOLHA DE AR COMPRIMIDO QUE PERMITE QUE ESTA CAMARA FUNCIONE COMO UMA CAMPANULA DE MERGULHO E PORTANTO SEJA VISITAVEL. ALIAS, A PLATAFORMA E CONCEBIDA DE MODO A QUE TODO O SEU INTERIOR SEJA VISITAVEL O QUE FACILITA A SUA CONSTRUCAO E MANUTENCAO. The invention is a NEW KIND OF **FLOATING** PLATFORM IN STABILIZED Moorings (2) tensioned TO SUPPORT THE POWER GENERATOR **EOLICA** TO INSTALL THE SEA. SHE IS DIFFERENT IN A STRUCTURAL SOLUTION TO GUARANTEE THAT **FLOATS** (1) IS ALWAYS IN PILLS external forces is SUBMERGED ALWAYS AND MAY USE IS SO IN YOUR BUILDING AN ECONOMIC MATERIAL AS **CONCRETE** ARMED. TO ENSURE THAT THE Moorings (2) cross OS **FLOATS** TURNING THE STRUCTURE ABOVE THESE, CREATING YOURSELF SO THEREFORE THE mooring CAMARA (3) A BUBBLE COMPRESSED AIR THAT ALLOWS THIS CAMERA RUN AS A DIVING CAMPANULA AND THEREFORE BE visitable. ALIAS, PLATFORM AND DESIGNED SO THAT ALL ITS INTERIOR IS visitable THAT FACILITATE ITS MAINTENANCE AND CONSTRUCTION.

Probable Assignee: ABREU MIGUEL MARINHO MENDES

Earliest Publication Date: 20151026

35) Family number: 61603252 (WO16016481A1)

© PatBase

GRAVITY-BASED FOUNDATION FOR OFFSHORE WIND TURBINES

Abstract: Gravity-based foundation for **offshore** wind turbines, which is manufactured using **floating**-dock technology and is constituted by a circular-section caisson (1), which is made lighter internally by means of hollow cells (11, 12, 13), and which is closed at the top by means of one or more covers (16), the central cell (13) of which is extended in the form of a mast (2) made from post-tensioned **concrete**, to which the metal tower (4) supporting the wind turbine is connected. The cells (11, 12, 13) of the caisson are filled with a solid ballast (8) with the aim of lowering the centre of gravity of the caisson, such that the design of the foundation overall enables the latter to be towed and sunk to the seabed **offshore** without the need for special craft or the use of additional buoyancy means, such that at every stage the conditions of naval stability are sufficient.

Probable Assignee: PROES CONSULTORES S A

Earliest Publication Date: 20160204

36) Family number: 58404553 (WO15011323A1)

© PatBase

STABILISING SYSTEM FOR COMPENSATING FOR ANGULAR MOVEMENT ON MOBILE LIDAR PLATFORMS

Abstract: The invention relates to a stabilisation system for angular compensation on mobile LIDAR platforms, comprising, at least, a LIDAR and an optical deflector system characterised in that said deflector system comprises, at least, a deflector that can move on its pitch and roll axes. Said deflector is designed to maintain the LIDAR pointing in a given direction by means of an electronically-controlled angular compensation mechanism.

Probable Assignee: UNI POLITECNICA DE CATALUNYA

Earliest Publication Date: 20150129

37) Family number: 60685511 (BRPI0907499A)

© PatBase

TURBINA **EOLICA** VERTICAL PARA AUTO-MAR VERTICAL WIND TURBINE FOR AUTO-MAR (MACHINE TRANSLATION)

Abstract: Source: BRPI0907499A RESUMO Patente de invencao: "Turbina **eolica** vertical para alto mar". Turbina **eolica** composta de sistema de flutuacao que a faz flutuar sobre o ar comprimido pelo seu proprio peso, sendo livre de atrito com partes mecanicas moveis, contando tambem com sistema de captacao de vento que capta enorme quantidade de vento e o lanca em giro para a turbina, sendo que todo o sistema se encontra sobre uma plataforma oceanica de concreto que tambem flutua sobre o ar comprimido se mantendo segura e equilibrada pela forca de empuxo da agua. Notadamente o setor energetico e industrial sao as areas tecnicas as quais se destina o presente invento. ABSTRACT patent, "vertical wind turbine for **offshore**". **Eolica** turbine consists of flotation system that **floats** on the air compressed by its own weight, and friction free with mobile mechanical parts, counting also with wind gathering system that captures huge amount of wind and the spear in turning to the turbine, and the whole system is on a oceanic platform of **concrete** that also **floats** on the air remained safe and balanced by the buoyant force of the water. Notably the energetic and industrial sectors are the technical areas which is intended the present invention.

Probable Assignee: MONTEIRO NADILTON DE SOUZA

Earliest Publication Date: 20150908

38) Family number: 31980245 (ES2232285B)

© PatBase

AEROGENERADOR FLOTANTE EN EL AGUA

Abstract: Source: ES2232285B Aerogenerador flotante en el agua, constituido por un aerogenerador convencional (9), con un fuste (1) que sobresale de la superficie del agua, que presenta una parte sumergida a modo de fuste invertido (3), que dispone de un conjunto de flotadores (4) que evitan el hundimiento y con una linea de flotacion en la base del fuste (10), presentando en torno a dicha linea de flotacion o base del fuste aereo (10) unos medios de sujecion de la misma, que establecen el eje de giro en la propia base, y unos medios que evitan el movimiento oscilatorio del aerogenerador en torno a la base (10).

Probable Assignee: SERVICIOS DE INGENIERIA Y MONT

Earliest Publication Date: 20050516

39) Family number: 48432882 (WO11026210A1)

© PatBase

VERTICAL **OFFSHORE** WIND TURBINE

Abstract: A vertical **offshore** wind turbine comprises a buoyancy system for supporting the turbine on an air layer, without friction with moving mechanical parts, and a wind harvesting system that harvests an enormous amount of wind and causes it to rotate for the turbine; the entire system is arranged on an ocean platform made of **concrete** that also **floats** on air, being kept secure and in equilibrium by the buoyant force of water.

Probable Assignee: DE SOUZA MONTEIRO NADILTON

Earliest Publication Date: 20110310

40) Family number: 55375738 (ES2435090B)

© PatBase

MODULO CONVERTIDOR DE ENERGIA DE LAS OLAS MARINAS SUMERGIBLE, Y SISTEMA CONVERTIDOR QUE COMPRENDE UNA PLURALIDAD DE TALES MODULOS

Abstract: Source: ES2435090B Modulo convertidor de energia de las olas marinas, que comprende un cuerpo contenedor (8) cerrado por una tapa (11) desplazable verticalmente en respuesta a cambios de peso entre valles (20a) y crestas (20b) de las olas que pasan encima del modulo convertidor (M), y una camara interna (8a) que esta al vacio y que aloja un cilindro hidraulico (5) que bombea agua marina a presion a un circuito hidraulico que incluye medios de acumulacion de energia (13) en forma de presion, medios de accionamiento (6) conectados al cilindro hidraulico (5) y a la tapa (11) para trasladar los desplazamientos de la tapa (11) al cilindro (5), y dos muelles (3) dispuestos entre la tapa (11) y el fondo del cuerpo contenedor (11) que se comprimen cuando la tapa (11) se desplaza hacia abajo al paso de una ola (20) y se expanden una vez pasada la ola empujando el elemento movil (11) hacia arriba. El sistema convertidor comprende una pluralidad de tales modulos (M).

Probable Assignee: UNIV PAIS VASCO

41) Family number: 69100465 (ES1208786U)

© PatBase

**SISTEMA CAPTADOR DE ENERGIA EOLICA Y MARITIMO FLUVIAL
WIND ENERGY COLLECTOR SYSTEM AND MARITIME FLUVIAL (MACHINE TRANSLATION)**

Abstract: Source: ES1208786U 1. Sistema captador de energia eolica y maritimo fluvial utilizando turbinas axiales o de palas radiales montadas sobre flotadores anclados al fondo del mar, que comprende uno o mas flotadores sujetos o anclados a uno o mas bloques de hormigon en el fondo del mar mediante una o mas cadenas o cables, una o mas turbinas de palas radiales, generadores electricos, compresores de aire o bombas hidraulicas, los flotadores se unen entre si con cadenas, cables o cuerdas. 1. Wind energy collector system and maritime fluvial using axial turbines or radial blades mounted on floats anchored to the bottom of the sea, comprising one or more floats subjects or anchored to one or more of concrete blocks at the bottom of the sea by means of one or more chains or cables, one or more turbines of radial blades, generators, air compressors or hydraulic pumps, the floats are joined together by chains, cables or ropes.

Probable Assignee: MUNOZ SAIZ MANUEL

Earliest Publication Date: 20180402

42) Family number: 64285308 (BR102015007559A)

© PatBase

**APERFEICOAMENTO INTRODUCIDO EM GERADOR EOLICO A BALAO DE GAS HELIO COM ASAS DE SUSTENTACAO
WHILE INTRODUCED IN THE GAS GENERATOR EOLICO BALAO HELIO WITH WINGS OF SUPPORT (MACHINE TRANSLATION)**

Abstract: Source: BR102015007559A RESUMO "APERFEICOAMENTO INTRODUCIDO EM GERADOR EOLICO A BALAO DE GAS HELIO COM ASAS DE SUSTENTACAO", mais especificamente trata-se de um balao inflado com gas helio (1) que e engatado a um conjunto conhecido como nacele (41) onde mecanicamente esta instalado um gerador (4) e que possui sistema de ancoragem (12) ao solo, devidamente dimensionadas aos esforcos resultantes; providos de sistema de fios ou cabos monofasicos ou trifasicos (8) ligados ao solo ao conjunto de inversor (14) ou transformador (15); sistema de aterramento (17), que interliga ao balao (1) conectado a um para-raio tipo Franklin (18) conectando o conjunto ao solo sendo tambem provido de sistema de sinalizacao aerea (19); o nacele (41) e provido de asas (6), com a possibilidade de conter flaps (46); o conjunto proposto tem implicitamente todo os sistemas de controle das asas, altitude, sistemas eletronicos de aquisicao, transmissao e processamento de dados das velocidades dos ventos, acoes da aerodinamica, controle da geracao eletrica, sendo aplicado toda a tecnologia embarcada, disponivel no mercado tecnologico da aeronautica e da engenharia eletrica; Varios conjuntos de naceles (41) podem ser distribuidos ao longo das asas (6) com a utilizacao de conjuntos completos de aerogeradores, ou as helices (3) podem ser distribuidos ao longo das asas, utilizando-se apenas um gerador de grande potencia, atraves da utilizacao de polias, engrenagens ou outro sistema de transmissao de movimento das helices (3) ao gerador(4). Enhancing THE HELIUM BALLOON INTRODUCED INTO WIND GENERATOR WITH WINGS PROPPANT," more specifically it is an inflated balloon with helium gas (1) that is engaged to a nacelle assembly 41 known as a generator (4) mechanically) where is installed and having ground anchoring system (12), suitably sized to resulting efforts; provided with wire or cable system (8) connected to ground at the single-phase or three-phase inverter assembly (14) or (15); (17 transformer grounding system) interconnecting the balloon (1) connected to a to-radius (18) connecting the ground type Franklin set being also provided overhead signaling system (19); (41) is provided with wings 6 nacelle), with a possible Abas (46); a set of contain implicitly proposed all control systems of the wings, altitude, data acquisition, transmission and processing electronic systems of wind speeds, the aerodynamics actions, control of electrical generation being applied all technology shipped, available under the aeronautics and electrical engineering; technological of multiple sets of nacelles (41) may be distributed along the wings (6) using complete sets of wind turbines or propellers (3) may be distributed along the wings, using only one large power generator, through the use of pulleys, gears or other motion of the blades (3 transmission system) to the generator(4).

Probable Assignee: DK INNOVA LTDA ME

Earliest Publication Date: 20161122

43) Family number: 68462157 (WO18024930A1)

© PatBase

SYSTEM FOR INSTALLING ANTI-SCOURING MATERIAL IN A SELF-FLOATING MARINE FOUNDATION, AND ASSOCIATED METHODS AND USES OF SAID SYSTEM

Abstract: The present invention relates to a system for installing anti-scouring material (1) on a prefabricated marine foundation (2), said foundation being transportable in a self-floating manner to its final position (5) on the seabed (22). The system comprises: at least one device (3) for housing the anti-scouring material (1); at least one device (4) for securing the anti-scouring material (1) and/or the housing device (3) to the marine foundation (2), the housing device (3) and the securing device (4) being installable on the marine foundation (2) prior to the marine foundation (2) being installed in its final position (5). The invention also relates to methods and uses of said system.

Probable Assignee: ESTEYCO SAP

Earliest Publication Date: 20180202

44) Family number: 63716488 (US2018119675A)

© PatBase

GRAVITY FOUNDATION FOR THE INSTALLATION OF OFFSHORE WIND TURBINES

Abstract: Source: US2018119675A A gravity-based foundation for the installation of offshore wind turbines, manufactured in a floating dock for towing to the final destination thereof, where it is anchored and finally completely submerged below sea level, comprising a concrete floating caisson, in the shape of a prism, with a hexalobular base, divided into several cells by at least one partition with a significantly circular cross section, concentric with a central cell, determining inner vertical cells interconnected with each other and with the exterior, which is closed at the top by a cover or covers that are removed once the foundation is anchored before being filled with a ballast material.

Probable Assignee: DRACE INFRAESTRUTURAS S A

Earliest Publication Date: 20161006

45) Family number: 52530343 (ES2392067A)

© PatBase

CENTRAL MARINA BRACEANTE.

Abstract: Source: ES2392067A La central marina braceante movida por un brazo rotativo, extensible, flotante soportado en una torre.La presente invencion aporta un mecanismo y un sistema para hacer rentable la generacion electrica movida con movimientos marinos.El mecanismo es una estructura o brazo articulado, rotativo, concentrico, extensible, desde su soporte y giro en una torre, hasta el nivel del mar. Incorpora un sistema de flotacion y otro de transmision sincronico capaces de recoger la energia de elevacion del mar y transmitir, sincronicamente, a los generadores el movimiento capturado duplicandolo.La torre es emplazable en cualquier punto del mar o la costa. Funciona como el brazo humano o la palanca y hara rentable la energia electrica marina renovable y no contaminara.

Machine translation: Central Marine braceante driven by a rotating arm, extensible, supported on a **floating** torre.La present invention provides a mechanism and a system for cost effective electricity generation with movements driven marinos.El mechanism is a structure or articulated arm, rotating concentric extensible, from its mounting and rotation in a tower to the sea level. Incorporates a **float** and a synchronous transmission capable of collecting the lifting power of the sea and transmit synchronously, to motion captured generators duplicandolo.La emplazable tower is anywhere in the sea or the coast. It works like the human arm or lever and will make profitable **offshore** renewable electrical energy and not pollute.

Probable Assignee: MAGAZ DIEZ PEDRO

Earliest Publication Date: 20121204

46) Family number: 61387331 (WO16005617A1)

© PatBase

AUTONOMOUS ANCHORING METHOD AND SYSTEM FOR FOUNDATIONS OF OFFSHORE STRUCTURES

Abstract: The invention relates to an autonomous anchoring method for foundations of **offshore** structures, which foundations are formed by a **floating** box made of **concrete** produced on a **floating** dock, and which can be towed to their final location, said box being provided with internal vertical cells, and being divided into cells which are interconnected with one another and which are provided with emptying and filling devices, permitting the regulation of the ballast level for the anchoring when being filled with sea water. The method comprises the following steps: handling the foundation by securing and attaching to at least three tugboats that pull radially from the foundation to be anchored from at least three different directions; connecting different necessary sensors for controlling the operation using a control unit; gradually sinking the foundation, in a controlled manner, until same reaches its installation position on the sea bed; and final ballasting of the foundation.

Probable Assignee: DRACE INFRAESTRUCTURAS S A

Earliest Publication Date: 20160114

47) Family number: 62536544 (US2017335825A)

© PatBase

TRANSITION ELEMENT FOR THE TRANSMISSION OF STRAINS BETWEEN A TOWER AND A SUB-STRUCTURE ON A FLOATING MONOLITHIC CONCRETE STRUCTURE FOR SUPPORTING MARINE WIND TURBINES

Abstract: Source: US2017335825A The invention relates to the embodiment, by means of a pre-stressed **concrete** layer, on **floating** structures for supporting wind turbines, of the transition zone between the tower, of a lesser diameter, and the **concrete float**, of a greater diameter, whether the tower is made of metal or **concrete**. Said layer of revolution has the optimum geometry for the correct transmission of forces between the two parts, the tower and the **float**, with a reduced thickness and without the need for external rigidifying and reinforcing elements on the surfaces thereof, which would increase the weight and the cost of the structure.

Probable Assignee: UNIVERSITAT POLITECNICA DE CATALUNYA

Earliest Publication Date: 20160531

48) Family number: 24114714 (WO02082894A1)

© PatBase

FISH FACTORY SHIP FOR FISHING, FATTENING AND TRANSPORTATION

Abstract: The invention relates to a fish factory ship for fishing, fattening and transportation, comprising a cylindrical structure formed by three bodies (2, 3 and 4), wherein the top part of the central body has a deckhouse (3') and the top floor (20) forms a deck. It also has a floor (21) for processing (21) and a floor (22) for general services, in addition to a turbine chamber (23), cold storage chambers and other elements required for keeping, slaughtering and conserving fish.

Probable Assignee: OTAMENDI BUSTO SANTIAGO

Earliest Publication Date: 20021024

49) Family number: 54276515 (US2016115936A)

© PatBase

TIDAL POWER GENERATION SYSTEM AND METHODS

Abstract: Source: US2016115936A The invention provides a system for the extraction of energy from an underwaterflow stream in a body of water. The system comprises a support frame which comprises a plurality of receptacles for mounting functional modules on the support frame. The plurality of receptacles are arranged to form a horizontally-distributed two-dimensional array on the support frame. The plurality of vertical axis turbine units is configured to be interchangeably mounted in the receptacles.

Probable Assignee: 1847 SUBSEA ENGINEERING LTD

Earliest Publication Date: 20141112

50) Family number: 63484280 (MX2014013711A)

© PatBase

WAVE ENERGY TO ELECTRICAL ENERGY BY MEANS OF THE GEEEAT SYSTEM.

Abstract: Wave energy to electrical energy by means of the G.E.E.E.A.T. system causes the abundant Wave Energy (11) to collide with the front surface of a receiving **offshore** channel (1) parallel to the coastline. The front surface is a ramp (17) appropriately designed to raise the water volume to the highest possible height by converting Wave Energy to Potential or Height Energy. The water which is raised and trapped is immediately moved horizontally onshore for flowing through the channels. Due to the water movement entering and exiting a hydraulic rotor wheel (7) coupled to an electrical generator (8) and connected to the distribution electrical network, the water returns to an enclosed beach as a river (13) through all the channels, thereby obtaining still oxygenated water with plankton, to be used as marine hatcheries (10) for producing food derived from sea species. This beach can be shared with tourism in hazardous seas, as well as beaches that were inaccessible. The System Generates electrical energy, jobs, food, and tourism in hazardous seas and also in inaccessible beaches.

Probable Assignee: VELAZQUEZ CARLOS EDUARDO ZALDIVAR

Earliest Publication Date: 20160510

51) Family number: 50008334 (PT105070A)

© PatBase

**CENTRAL DE APROVEITAMENTO DE ENERGIA DAS ONDAS DO MAR EM AGUAS PROFUNDAS.
CENTRAL ENERGY RECOVERY OF SEA WAVES IN DEEP WATERS. (MACHINE TRANSLATION)**

Abstract: Source: PT105070A O PRESENTE INVENTO REFERE-SE A UM DISPOSITIVO E UM PROCESSO DE TRANSFORMACAO DA ENERGIA DO MOVIMENTO OSCILATORIO DAS ONDAS DO MAR EM POTENCIAL HIDRAULICO EM PROFUNDIDADE, O QUAL E APLICAVEL NA PRODUCAO DE ELETRICIDADE. CONSISTE NUM RESERVATORIO (1), FIXO AO FUNDO DO MAR (2) E SUBDIVIDIDO EM DUAS CAMARAS, UMA CAMARA DE TURBINAGEM (3), QUE COMUNICA COM O EXTERIOR POR UMA VALVULA HIDRAULICA (8), E UMA CAMARA EXTENSIVEL (4), QUE COMUNICA COM O EXTERIOR POR UMA COMPORTA ANTIRRETORNO EXTERIOR (10A), AMBAS COMUNICAM ENTRE SI POR UMA COMPORTA ANTIRRETORNO INTERIOR (10B) O FLUXO HIDRAULICO (11A E 11B) ENTRA PELA VALVULA HIDRAULICA (8), ACIONA UMA TURBINA (7) E, NUM MOMENTO DE EXPANSAO (MOMENTO B), DEVIDO A CRIACAO DE VACUO, CAI POR GRAVIDADE (12) DA CAMARA DE TURBINAGEM (3) PARA A CAMARA EXTENSIVEL (4) ATRAVES DA VALVULA ANTIRRETORNO INTERIOR (10B). A AGUA E EXPULSA (13) DO INTERIOR DA CAMARA EXTENSIVEL (4) PARA O EXTERIOR NUM MOMENTO DESCENDENTE DA ONDA (MOMENTO C) ATRAVES DA COMPORTA ANTIRRETORNO EXTERIOR (10A) E IMPEDIDA DE VOLTAR A CAMARA DE TURBINAGEM PELA COMPORTA ANTIRRETORNO INTERIOR (10B E 15). A CAMARA EXTENSIVEL (4) E CONSTITUIDA POR UMA ESTRUTURA TUBULAR (9) QUE SE INSERE NO INTERIOR DO RESERVATORIO (1) PELA BASE E EXPANDE-SE POR EFEITO DA FORCA ASCENSIONAL DE UM CORPO FLUTUANTE (6) LOCALIZADO A SUPERFICIE E LIGADO AO RESERVATORIO (1) POR UM CABO (5), AQUANDO DA PASSAGEM DE UMA ONDA (MOMENTO B).

Machine translation: INVENTION THIS REFERS TO A DEVICE AND A PROCESS FOR PROCESSING OF ENERGY oscillatory movement of SEA WAVES IN HYDRAULIC POTENTIAL IN DEPTH, AND APPLICABLE WHICH THE PRODUCTION OF ELECTRICITY. CONSISTS IN RESERVOIR (1), FIXED TO THE BOTTOM OF THE SEA (2) is divided into two chambers, one CAMARA DE TURBINAGEM (3) THAT COMMUNICATION WITH THE OUTSIDE BY A HYDRAULIC VALVE (8), AND A CAMERA extensible (4), THAT COMMUNICATION WITH THE OUTSIDE IN AN EXTERIOR COMPORTA-seal (10A), BOTH COMMUNICATE WITH EACH OTHER IN AN INTERIOR COMPORTA-seal (10B) HYDRAULIC FLOW (11A and 11B) ENTERS THE HYDRAULIC VALVE (8), drives a turbine (7) And, IN A TIME OF EXPANSION (TIME B), DUE TO CREATION OF VACUUM, GRAVITY FALLS (12) THE CHAMBER OF TURBINAGEM (3) FOR THE CAMARA extensible (4) THROUGH THE INTERIOR check valve (10B). The AGUA is expelled (13) OF THE INTERIOR extensible CAMARA (4) IN TIME FOR THE EXTERIOR OF WAVE DOWN (TIME C) THROUGH THE EXTERIOR COMPORTA-seal (1a) AND BARRED FROM BACK OF A CAMERA FOR TURBINAGEM COMPORTA INTERIOR-seal (E 10B 15). The extensible CAMARA (4) consists of a TUBULAR STRUCTURE (9) that is inserted inside the shell (1) THE BASE AND EXPANDS IN EFFECT FROM UP buoyancy OF A **FLOATING** BODY (6) A SURFACE AND LOCATED ON THE RESERVOIR (1) IN A CABLE (5), DURING PASSAGE OF A WAVE (TIME B).

Probable Assignee: FREITAS HELDER SPINOLA DE

Earliest Publication Date: 20120903