



(51) International Patent Classification:
B63H 11/00 (2006.01)

(21) International Application Number:
PCT/IB2015/052772

(22) International Filing Date:
16 April 2015 (16.04.2015)

(25) Filing Language: English

(26) Publication Language: English

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(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG,

MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

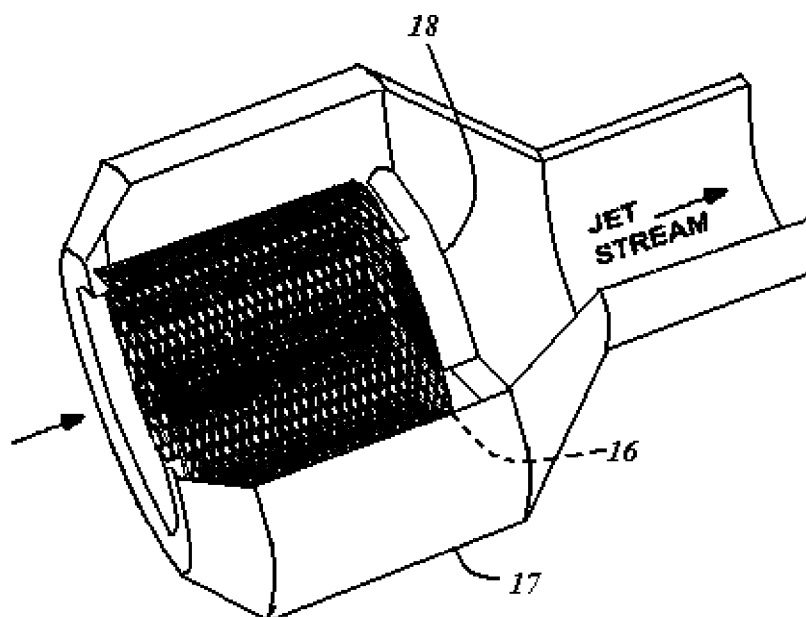
Declarations under Rule 4.17:

— as to the identity of the inventor (Rule 4.17(i))

Published:

— with international search report (Art. 21(3))

(54) Title: **BLADELESS MARINE PROPULSOR**



(57) Abstract: A propulsor housing having an enlarged midsection and tapered forward and rearward portions wherein mounted electric motor rotates bladeless impeller. An impeller made of expanded metal mesh during rotation due to centrifugal force and complicated hydrodynamic processes creates an anomalous laminar jet stream of water without cavitation at the outer periphery of the impeller increasing the water pressure adjacent the rearward portion of the housing producing a desired forward thrust for the propulsor.

BLADELESS MARINE PROPULSOR

DESCRIPTION:

BACKGROUND OF THE INVENTION

This invention relates to marine propellers for propelling boats, ships and other types of marine and submarine vessels through water.

Now, the marine propellers are not 100 percent efficient. Not all the power applied to the propeller drive shaft converted into forward movement of the boat.

Various advantages realized using of a more efficient propeller. The rate of fuel consumption is possible to reduce. The speed of the vessel is possible to increase. Alternatively, a combination of these advantages is prospective.

As is further known, every present day propeller has a definite upper limit as to the rate at which it can be rotated do to the cavitation effect. Such effects can become sufficiently violent to cause damage to the propeller and the mechanisms driving same.

A marine propeller capable of operating at higher revolution rates than present day propellers would offer various advantages. For the case of larger oceangoing type boats and ships, for example, it would enable a more direct connection of the propeller to the high speed turbines commonly used, thus providing a further improvement in overall efficiency.

SUMMARY OF INVENTION

The object of the invention is, therefore, to provide a new and improved marine propulsor of increased efficiency.

It is another object of the invention to provide a new and improved marine propulsor capable of operating at a higher number of revolutions per minute with reduced vibration effects and noise.

In accordance with the invention, a marine impeller comprises of a housing in which the impeller rotates. Impeller is a topless cylinder made of expanded metal mesh. Completely new type of bladeless propulsor during rotation, the water forms moving instantaneously in time and space a very thin water cylinder, where the water is abnormally loses viscosity, in the short time while in the body of the propulsor. Said cylinder of water moves continuously to the outer periphery by centrifugal force. Differentiated hydrodynamics and thermodynamics forms process very much reminding super fluidity, which generates an abnormal increase in water flow at the outlet of propulsor.

It is another object of the invention to provide sustainable management of the ship's speed by adjusting the speed of the drive motor.

This is the future of shipbuilding without the propellers, blades, friction, noise, cavitation and high production cost marine propulsors. Surface vessels and submarines equipped with bladeless impellers will differ significantly in velocity, maneuverability, and low noise and production costs.

BRIEF DESCRIPTION OF THE DRAWING

Referring to the drawing:

FIG. 1 is a perspective view of an embodiment of a marine propulsor constructed in accordance with the present invention;

DESCRIPTION OF THE ILLUSTRATED EMBODIMENT

Referring to FIG. 1, there is view of a marine propulsor constructed in accordance with the present invention.

This embodiment includes a propulsor housing 17 having an enlarged midsection and tapered forward and rearward portions wherein a bladeless impeller 16 in shape of a cylinder without a top circular plane surface with a curved surface in the middle made of expanded metal mesh and the bottom circular plane surface attached to it drive shaft 18.

A conventional propeller operates more in the manner of a screw. The blades of the convention propeller engage the water and produce a direct thrust thereon, which pushes the water in the rearward direction. With the present propulsor, on the other hand, the bladeless impeller is not engaged in such a rearward pushing of the water. Instead, it functions to squeeze the water to a very thin water cylinder, where the water is abnormally loses viscosity, in the short time while in the body of the propulsor. Said cylinder of water moves continuously to the outer periphery by centrifugal force. Differentiated hydrodynamics and thermodynamics forms process very much reminding super fluidity, which generates an abnormal increase in laminar flow of water without cavitation at the outer periphery of the impeller increasing the water pressure adjacent the rearward portion of the housing producing a desired forward thrust for the propulsor.

The present propulsor may operate at a considerably higher number of revolutions per minute without the cavitation point.

A propulsor constructed in accordance with the present invention can very readily provide an improvement in efficiency as compared with a conventional propeller of the same overall diameter, and decrease noise emissions, vibrations. At the same time, propulsor significantly increases the speed and maneuverability of surface ships and submarines.

An impeller is possible to use as a compressor in the refrigeration and air conditioning technology.

The device may be employed as a basic element for all kinds of pumps.

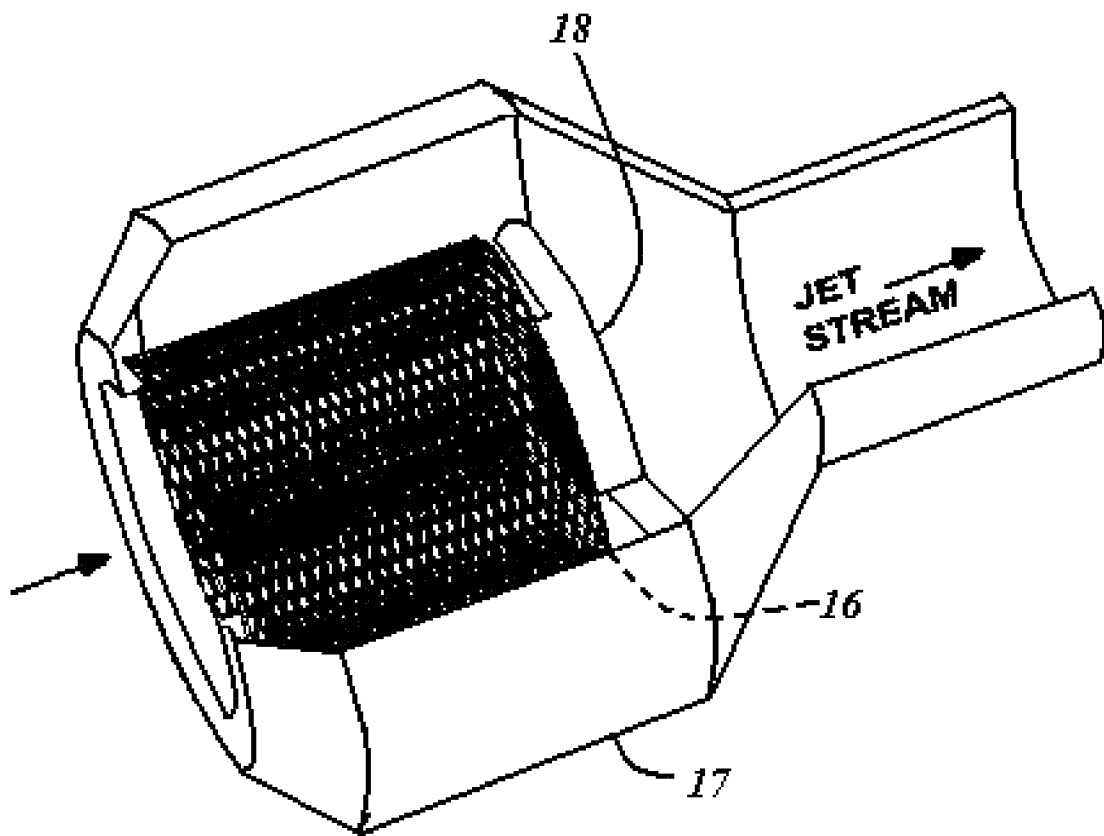
Propulsor can also function on atmospheric air on the vertical takeoff and landing aircrafts.

Unique application of propulsor is its use on spaceships as a concentrator-propulsor to run on small amounts of space molecular hydrogen and cosmic dust powered by solar panels that power is enough. The above application of propulsor will make possible long-term space flights without fuel on board.

While there has been described what are at present considered to be preferred embodiments of this invention, it will be obvious to those skilled in the art that various changes and modifications may be made therein without departing from the invention, and it is, therefore, intended to cover all such changes and modifications as fall within the true spirit and scope of the invention.

CLAIMS:

1. A bladeless marine propulsor comprising:
2. A bladeless marine propulsor in accordance with claim 1 consists of housing.
3. A bladeless marine propulsor in accordance with claim 2 consists of a housing in which mounted electric motor rotates bladeless impeller.
4. A bladeless impeller in accordance with claim 3 the shape of impeller corresponds to a cylinder without a top circular plane surface.
5. A bladeless impeller in accordance with claim 3 the impeller has a curved surface in the middle made of expanded metal mesh.
6. A bladeless impeller in accordance with claim 3 wherein it consists of the bottom circular plane surface attached to electric motor.
7. A bladeless impeller in accordance with claim 6 during rotation by electric motor due to centrifugal force and complicated hydrodynamic processes creates an anomalous laminar flow of water without cavitation at the outer periphery of the impeller increasing the water pressure adjacent the rearward portion of the housing producing a desired forward thrust for the propulsor.



INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2015/052772

A. CLASSIFICATION OF SUBJECT MATTER

INV. B63H11/00
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

B63H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EP0-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Emin Gadzhiyev: "NEW GENERATION BLADELESS PROPULSOR FOR NAVAL NUCLEAR PROPULSION PROGRAM", 2 February 2015 (2015-02-02), XP055238548, Retrieved from the Internet: URL:https://www.youtube.com/watch?v=BBao4p8DSC0 [retrieved on 2016-01-04] the whole document	1-7
X	WO 2005/081766 A2 (GRANDE SALVATORE F III [US]; DRAPER DAVID R [US]) 9 September 2005 (2005-09-09) page 19, line 12 - line 17; claims; figures	1-3

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

4 January 2016

Date of mailing of the international search report

12/01/2016

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2015/052772

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
W0 2005081766 A2	09-09-2005	US 2005214109 A1 W0 2005081766 A2	29-09-2005 09-09-2005
