



(51) International Patent Classification:

C02F 1/42 (2006.01) F04D 29/22 (2006.01)
F04D 13/06 (2006.01)

(21) International Application Number:

PCT/US2018/043208

(22) International Filing Date:

22 July 2018 (22.07.2018)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/535,842	22 July 2017 (22.07.2017)	US
62/535,843	22 July 2017 (22.07.2017)	US
62/535,840	22 July 2017 (22.07.2017)	US
62/535,844	22 July 2017 (22.07.2017)	US
16/041,808	22 July 2018 (22.07.2018)	US

(72) Inventor; and

(71) Applicant: ABLEDU, Kodzo, Obed [US/US]; P.O. Box 70288, Pasadena, CA 91117 (US).

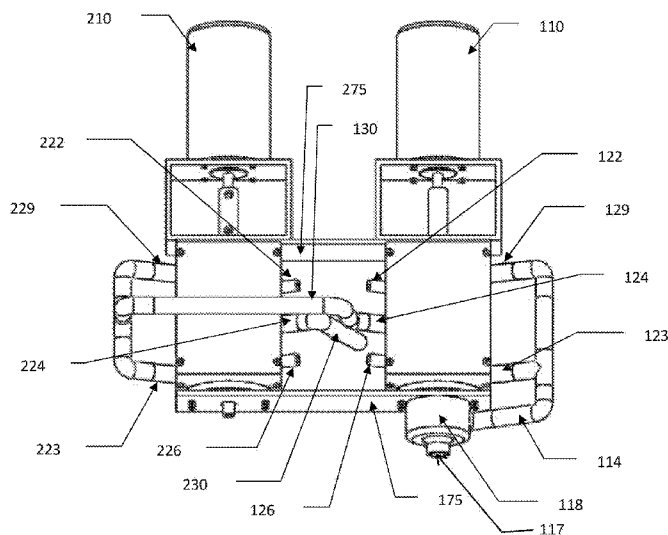
(74) Agent: LEE, Choongseop; Park Law Firm, 3255 Wilshire Blvd. Suite 1110, Los Angeles, CA 90010 (US).

(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, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, 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,

(54) Title: ION SEPARATOR WATER PUMP

Fig. 9



(57) Abstract: An ion separator water pump is provided, comprising a stator cylinder with input and output ports, homopolar north poles, and homopolar south poles, a drive shaft, a rotor core, and seals. Salt water pumped through the ion separator water pumps is desalinated by alternatively flushing out the positive and negative ions at various points as the water flows through the proposed devices. Two pump configurations are presented for use in desalination of salt water.



TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
KM, ML, MR, NE, SN, TD, TG).

Published:

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(88) Date of publication of the international search report:
28 March 2019 (28.03.2019)

A. CLASSIFICATION OF SUBJECT MATTER**C02F 1/42(2006.01)i, F04D 13/06(2006.01)i, F04D 29/22(2006.01)i**

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)

C02F 1/42; B01D 61/44; C02F 1/469; C12M 1/40; F04D 25/06; F25B 9/04; F25B 9/14; G01N 9/00; H02K 1/18; F04D 13/06; F04D 29/22

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: ion, separator, pump, water, salt, cylinder, pole, lamination, channel, compartment, rotor, core, stator, and shaft

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2014-0227118 A1 (KIM, BYOUNG SOO) 14 August 2014 See paragraphs [0057]-[0091] and figures 1-3.	1-20
A	US 2012-0306311 A1 (ENDO et al.) 06 December 2012 See the entire document.	1-20
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A	KR 10-2015-0030648 A (BELIAVSKY, YAN) 20 March 2015 See the entire document.	1-20
A	US 2013-0059372 A1 (HOFSTADLER et al.) 07 March 2013 See the entire document.	1-20

 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

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"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

26 February 2019 (26.02.2019)

Date of mailing of the international search report

27 February 2019 (27.02.2019)

Name and mailing address of the ISA/KR

International Application Division

Korean Intellectual Property Office

189 Cheongsu-ro, Seo-gu, Daejeon, 35208, Republic of Korea

Facsimile No. +82-42-481-8578

Authorized officer

MIN, In Gyou

Telephone No. +82-42-481-3326



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2018/043208

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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