

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(10) International Publication Number
WO 2012/158264 A3

(43) International Publication Date
22 November 2012 (22.11.2012)

(51) International Patent Classification:

C02F 1/04 (2006.01) *B01D 5/00* (2006.01)
B01D 1/00 (2006.01) *C02F 103/08* (2006.01)

(21) International Application Number:

PCT/US2012/031250

(22) International Filing Date:

29 March 2012 (29.03.2012)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/486,596	16 May 2011 (16.05.2011)	US
61/608,428	8 March 2012 (08.03.2012)	US
61/613,728	21 March 2012 (21.03.2012)	US

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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, 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, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, 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, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, ML, MR, NE, SN, TD, TG).

Published:

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

(88) Date of publication of the international search report:

10 January 2013

(54) Title: HYDRAULIC DESALINATION DEVICE AND METHOD

(57) Abstract: A hydraulic desalination system, device and method includes lowering the pressure of liquid saltwater to the vaporization point by generating flow through piping and accompanying infrastructure that may include valves that impart friction and control flow, capturing the vapor, condensing the vapor using higher pressure supplied by the ambient surroundings producing freshwater, recovering the heat released during condensation by maintaining ambient temperatures greater than vapor temperatures, and then using the recovered heat to enhance and perpetuate vaporization in a cyclical manner. A novel spring-loaded pump for pumping fluids may facilitate the process.



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A. CLASSIFICATION OF SUBJECT MATTER*C02F 1/04(2006.01)i, B01D 1/00(2006.01)i, B01D 5/00(2006.01)i, C02F 103/08(2006.01)n*

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; B01D

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: desalination, vaporization, condensation, heat exchanger

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3440146 A (JOHAN A. LOUW) 02 May 1966 See abstract, columns 4-6, figures 1-17 and claims 1-24.	1-24
A	US 3783108 A (ESKO ENSIO HUHTA KOIVISTO et al.) 01 January 1974 See abstract, columns 7-9, figures 1-5 and claims 1-8.	1-24
A	KR 10-1997-0069882 A (WON, SEONGHO) 07 November 1997 See abstract, claims 1-5 and figure 1.	1-24
A	US 03859069 A (SELIBER JOSEPH) 07 January 1975 See abstract, columns 2-4, figure 1 and claims 1-2.	1-24



Further documents are listed in the continuation of Box C.



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* Special categories of cited documents:

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"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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Date of the actual completion of the international search

22 OCTOBER 2012 (22.10.2012)

Date of mailing of the international search report

23 OCTOBER 2012 (23.10.2012)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
189 Cheongsu-ro, Seo-gu, Daejeon Metropolitan
City, 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

Kim, Kwang Chul

Telephone No. 82-42-481-8293



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2012/031250Patent document
cited in search reportPublication
datePatent family
member(s)Publication
date

US 3440146 A

02.05.1966

None

US 3783108 A

01.01.1974

None

KR 10-1997-0069882 A

07.11.1997

None

US 03859069 A

07.01.1975

None