

(51) International Patent Classification:
F03G 7/00 (2006.01)(21) International Application Number:
PCT/US2010/059233(22) International Filing Date:
7 December 2010 (07.12.2010)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/267,146 7 December 2009 (07.12.2009) 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, RO, RS, RU, 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, 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))

— with amended claims (Art. 19(1))

(88) Date of publication of the international search report:
24 November 2011

Date of publication of the amended claims: 2 February 2012

(54) Title: METHOD AND APPARATUS FOR OSMOTIC POWER GENERATION

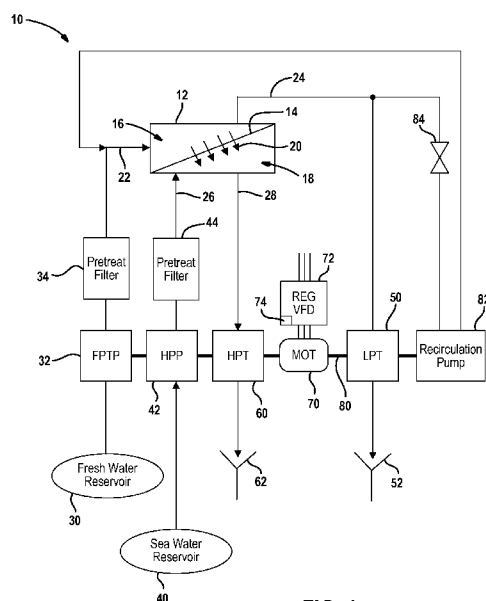


FIG. 1

(57) Abstract: An osmotic power generation system and method for generating osmotic power includes a membrane chamber having a semi-permeable membrane therein defining a first portion and a second portion therein. The system also includes a first pump communicating a first fluid to the first portion and a second pump communicating a second fluid to the second portion. The second fluid has higher total dissolved solids than the first fluid. A second portion energy recovery device is in fluid communication with the second portion. A power generator is in communication with the second portion energy recovery device generating electrical power in response to the second portion energy recovery device and the pressure in the second portion.