

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

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
25 June 2009 (25.06.2009)

PCT

(10) International Publication Number
WO 2009/077992 A3

(51) International Patent Classification:
B01D 61/50 (2006.01) **B01D 63/08** (2006.01)
B01D 61/54 (2006.01)

(21) International Application Number:
PCT/IB2008/055380

(22) International Filing Date:
17 December 2008 (17.12.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/006,047 17 December 2007 (17.12.2007) US

(71) Applicant (for all designated States except US): **BEN GURION UNIVERSITY OF THE NEGEV RESEARCH & DEVELOPMENT AUTHORITY** [IL/IL]; P.O.Box 653, 84105 Beer Sheva (IL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MESSALEM, Rami** [IL/IL]; Hagefen 25, 84965 Omer (IL). **KEDEM, Ora** [IL/IL]; 20 Vered Street, 84852 Beer Sheva (IL). **LINDER, Charles** [IL/IL]; Sderot Chen 57, 76469 Rehovot (IL).

(74) Agents: **WEBB & ASSOCIATES** et al.; P.O. Box 2189, 76121 Rehovot (IL).

(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, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, 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))
- 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:
13 August 2009

(54) Title: APPARATUS AND SYSTEM FOR DEIONIZATION

(57) Abstract: There is provided herein a membrane package comprising a plurality of membranes, wherein said membrane package is adapted to facilitate a feed stream flow having a process stream flow wherein said hydrodynamic resistance of said feed stream flow is substantially the same as said hydrodynamic resistance of said process stream flow.



WO 2009/077992 A3