

(51) International Patent Classification:
B01D 39/16 (2006.01) *B01D 39/20* (2006.01)(21) International Application Number:
PCT/US2013/038832(22) International Filing Date:
30 April 2013 (30.04.2013)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/642,914 4 May 2012 (04.05.2012) US
61/791,121 15 March 2013 (15.03.2013) US(71) Applicant: **TICONA LLC** [US/US]; 8040 Dixie Highway, Florence, Kentucky 41042 (US).(72) Inventors: **HUFEN, Julia**; Wallacherstraße 54, 47495 Rheinberg (DE). **SUBRAMONIAN, Suresh**; 410 Belrose Dr., Cary, North Carolina 27513 (US). **BAUER, Janine**; Bonnacker 30, 47228 Duisburg (DE). **LUEDTKE, Kerstin**; Auerbachs Hof 10i, 04416 Markkleeberg (DE). **SMITH, Jason**; 4415 Todd Rose Court, Cincinnati, Ohio 45244 (US). **CHEN, Dian**; 10019 Glensprings Pl., Union, Kentucky 41091 (US).(74) Agent: **ROBERTS, Peter**; Roberts Mlotkowski Safran & Cole, P.C., Suite 500, 7918 Jones Branch Drive, McLean, Virginia 22102 (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, 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, PA, 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, 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))

[Continued on next page]

(54) Title: PROCESSES AND FILTERS FOR DESALINATION OF WATER

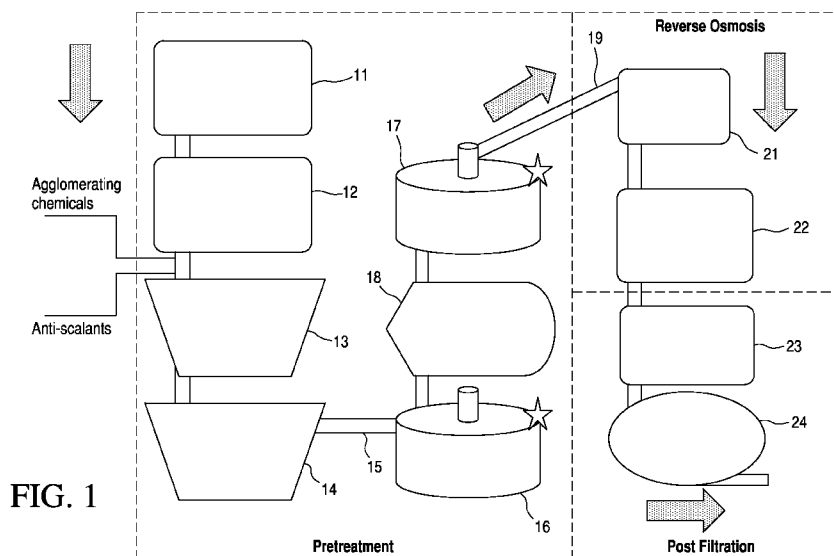


FIG. 1

(57) Abstract: In a process for the desalination of water, an impure, salt-containing water feed is passed through one or more filter media to remove from the feed impurities having a particle size greater than 50 μm and produce a first filtered water stream. The first filtered water stream is then passed through at least one further filter having an average pore size of 1 μm to 60 μm produced from sintered polyethylene particles having a molecular weight of at least 4×10^5 g/mol as determined by ASTM-D 4020 to remove at least a portion of the impurities having a particle size less than or equal to 50 μm from the first filtered water stream and produce a second filtered water stream. The second filtered water stream is passed directly to a reverse osmosis membrane to produce a purified water stream.





— *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:
9 January 2014

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2013/038832

A. CLASSIFICATION OF SUBJECT MATTER
INV. B01D39/16 B01D39/20
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)
B01D C02F

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)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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X	EP 0 743 085 A2 (MITSUBISHI PLASTICS INC [JP]) 20 November 1996 (1996-11-20) pages 3,4 page 5, line 51 - page 6, line 22; figures -/--	1-6,9-16



Further documents are listed in the continuation of Box C.



See patent family annex.

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Date of the actual completion of the international search

15 November 2013

Date of mailing of the international search report

22/11/2013

Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2013/038832

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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