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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
27 September 2012 (27.09.2012)

WIPO | PCT

(10) International Publication Number
WO 2012/129225 A3

(51) **International Patent Classification**:
B01D 15/02 (2006.01) ***B01D 15/00*** (2006.01)
B01D 15/42 (2006.01) ***B01D 24/36*** (2006.01)

(21) **International Application Number**:
PCT/US2012/029800

(22) **International Filing Date**:
20 March 2012 (20.03.2012)

(25) **Filing Language**: English

(26) **Publication Language**: English

(30) **Priority Data**:
61/466,694 23 March 2011 (23.03.2011) US

(71) **Applicant** *(for all designated States except US)*: **EXXONMOBIL CHEMICAL PATENTS INC.** [US/US]; 5200 Bayway Drive, Baytown, TX 77520-2101 (US).

(72) **Inventor; and**

(75) **Inventor/Applicant** *(for US only)*: **PORTER, John, R.** [US/US]; 1 Falling Leaf Court, Friendswood, TX 77546 (US).

(74) **Agents**: **GRIFFIS, Andrew, B.** et al.; Exxonmobil Chemical Company, Law Technology, P.O. Box 2149, Baytown, TX 77522-2149 (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, 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).

[Continued on next page]

(54) **Title**: REDUCTION IN FLUSHING VOLUME IN AN ADSORPTIVE SEPARATION SYSTEM

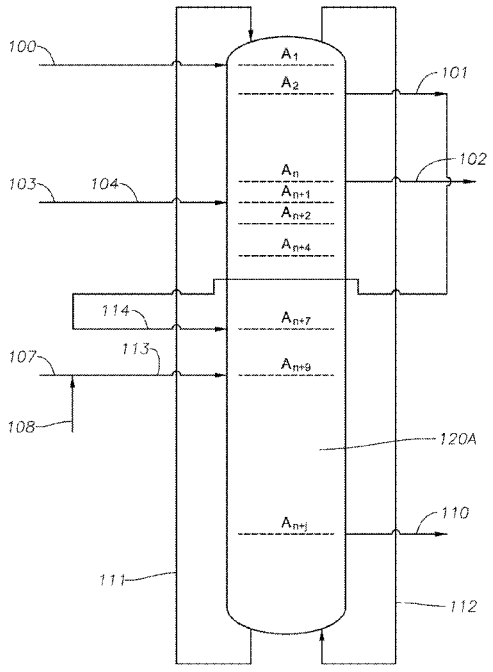


Fig. 1
(Prior Art)

(57) **Abstract**: A process for separating a product from a multicomponent feedstream to an adsorption apparatus or system is described. The apparatus or system may comprise a moving-bed or a simulated moving-bed adsorption means. The product comprises at least one organic compound, such as an aryl compound with alkyl substitutes. In embodiments the conduits used to supply the feedstream to the apparatus or system are flushed with media of multiple grades. The improvement is a more efficient use of the desorbent. In embodiments the process achieves improvements in one or more of efficiency of adsorption separation, capacity of adsorption apparatus systems, and purity of product attainable by adsorption process.

WO 2012/129225 A3

Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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:
27 December 2012