

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
26 June 2008 (26.06.2008)

PCT

(10) International Publication Number
WO 2008/074791 A1

(51) International Patent Classification:
C07D 301/32 (2006.01)

(21) International Application Number:
PCT/EP2007/064113

(22) International Filing Date:
18 December 2007 (18.12.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
06126675.5 20 December 2006 (20.12.2006) EP

(71) Applicant (for all designated States except US): **SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ B.V.** [NL/NL]; Carel van Bylandtlaan 30, NL-2596 HR The Hague (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BECKERS, Johannes Gerhardus Joseph** [NL/NL]; Badhuisweg 3, NL-1031 CM Amsterdam (NL). **DEN BOESTERT, Johannes Leendert Willem Cornelis** [NL/NL]; Badhuisweg 3, NL-1031 CM Amsterdam (NL). **WAGSTAFF, Nigel** [GB/NL]; Badhuisweg 3, NL-1031 CM Amsterdam (NL).

(74) Agent: **SHELL INTERNATIONAL B.V.**; Intellectual Property Services, PO Box 384, NL-2501 CJ The Hague (NL).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, 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, 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, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

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

Published:

— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(54) Title: PROCESS FOR REMOVING POLY(PROPYLENE OXIDE) FROM PROPYLENE OXIDE BY MEMBRANE SEPARATION

(57) Abstract: The invention relates to a process for removing poly(propylene oxide) from propylene oxide by membrane separation, wherein a membrane having an average pore size of from 0 to 5 nm is used. In said process, a liquid feed comprising propylene oxide and poly(propylene oxide) may be separated by the membrane into a permeate comprising propylene oxide and either no poly(propylene oxide) or poly(propylene oxide) at a concentration which is lower than the poly(propylene oxide) concentration in the feed, and a retentate comprising propylene oxide and poly(propylene oxide) at a concentration which is higher than the poly(propylene oxide) concentration in the feed.



WO 2008/074791 A1