

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
19 June 2008 (19.06.2008)

PCT

(10) International Publication Number
WO 2008/073253 A3

(51) International Patent Classification:
B01J 19/18 (2006.01) C08G 63/80 (2006.01)
B01J 19/24 (2006.01)

(21) International Application Number:
PCT/US2007/024926

(22) International Filing Date:
5 December 2007 (05.12.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/635,411 7 December 2006 (07.12.2006) US

(71) Applicant: EASTMAN CHEMICAL COMPANY
[US/US]; 200 South Wilcox Drive, Kingsport, TN 37660
(US).

(72) Inventor: DEBRUIN, Bruce, Roger; 119 Chadwick
Trail, Lexington, SC 29072 (US).

(74) Agent: OWEN, Steven, A.; P.O. Box 511, Kingsport, TN
37662-5075 (US).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,

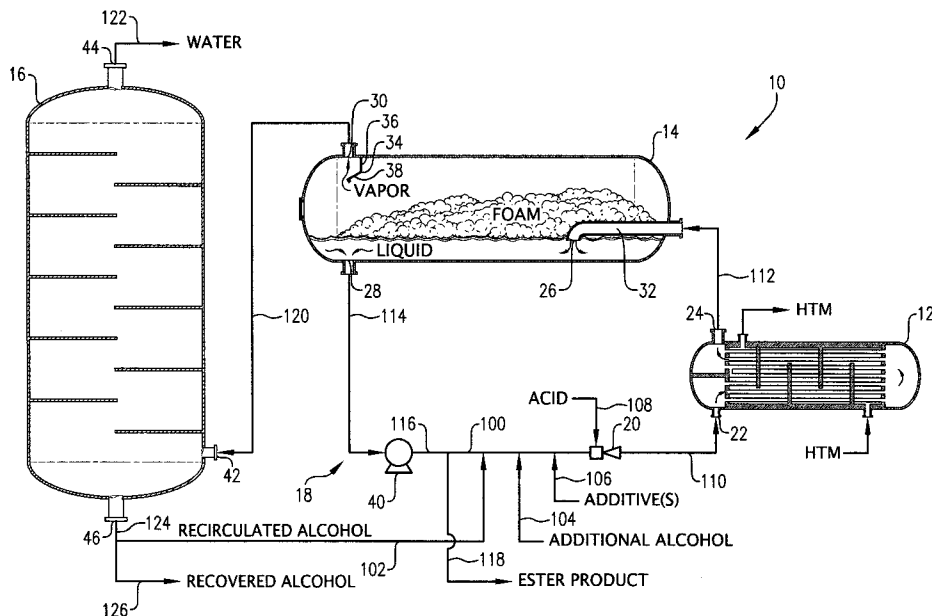
AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG,
ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL,
IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK,
LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW,
MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL,
PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, 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).

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

(88) Date of publication of the international search report:
11 December 2008

(54) Title: POLYESTER PRODUCTION SYSTEM EMPLOYING RECIRCULATION OF HOT ALCOHOL TO ESTERIFICA-
TION ZONE



(57) Abstract: A polyester production process employing an esterification system that uses a distillation column to recover alcohol produced from an esterification zone and then recirculates the recovered alcohol back to the esterification zone without substantially cooling the recovered alcohol.

WO 2008/073253 A3

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/024926A. CLASSIFICATION OF SUBJECT MATTER
INV. B01J19/18 B01J19/24 C08G63/80

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)
C08G B01J

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 practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/161166 A1 (NAKANE MIKIO [JP] ET AL) 31 October 2002 (2002-10-31) paragraph [0032]; claim 1; figure 1; example 1	1-29
X	US 6 100 369 A (MIYAJIMA KAZUMOTO [JP] ET AL) 8 August 2000 (2000-08-08) figure 1; example 1	1-29
X	US 3 590 072 A (LEYBOURNE ALLEN E) 29 June 1971 (1971-06-29) figure 1; example 1	1-29
A	US 4 146 729 A (GOODLEY GEORGE R ET AL) 27 March 1979 (1979-03-27) claim 1; figure 1	30-36

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

17 April 2008

Date of mailing of the international search report

22/10/2008

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Bergmeier, Martin

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/024926

Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
US 2002161166	A1	31-10-2002	CN 1383438 A	04-12-2002
			DE 60112885 D1	29-09-2005
			DE 60112885 T2	01-06-2006
			EP 1245606 A1	02-10-2002
			WO 0183582 A1	08-11-2001
			TW 583216 B	11-04-2004
			<hr/>	
US 6100369	A	08-08-2000	AT 248875 T	15-09-2003
			DE 69817726 D1	09-10-2003
			DE 69817726 T2	08-07-2004
			EP 0913418 A1	06-05-1999
			ES 2205477 T3	01-05-2004
			WO 9850448 A1	12-11-1998
			JP 3300370 B2	08-07-2002
			KR 20000022207 A	25-04-2000
			TW 482790 B	11-04-2002
<hr/>				
US 3590072	A	29-06-1971	BE 706678 A	17-05-1968
			CH 479649 A	15-10-1969
			DE 1668434 A1	05-08-1971
			GB 1210535 A	28-10-1970
			IL 28941 A	26-05-1971
			JP 49033946 B	11-09-1974
			LU 54895 A1	17-06-1968
			NL 6715645 A	20-05-1968
<hr/>				
US 4146729	A	27-03-1979	BR 7802164 A	28-11-1978
			CA 1114831 A1	22-12-1981
			DE 2815185 A1	19-10-1978
			ES 468609 A1	16-11-1978
			FR 2386572 A1	03-11-1978
			GB 1598972 A	30-09-1981
			IT 1202861 B	15-02-1989
			JP 53126096 A	02-11-1978
			MX 149664 A	09-12-1983
			NL 7803741 A	10-10-1978