

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau



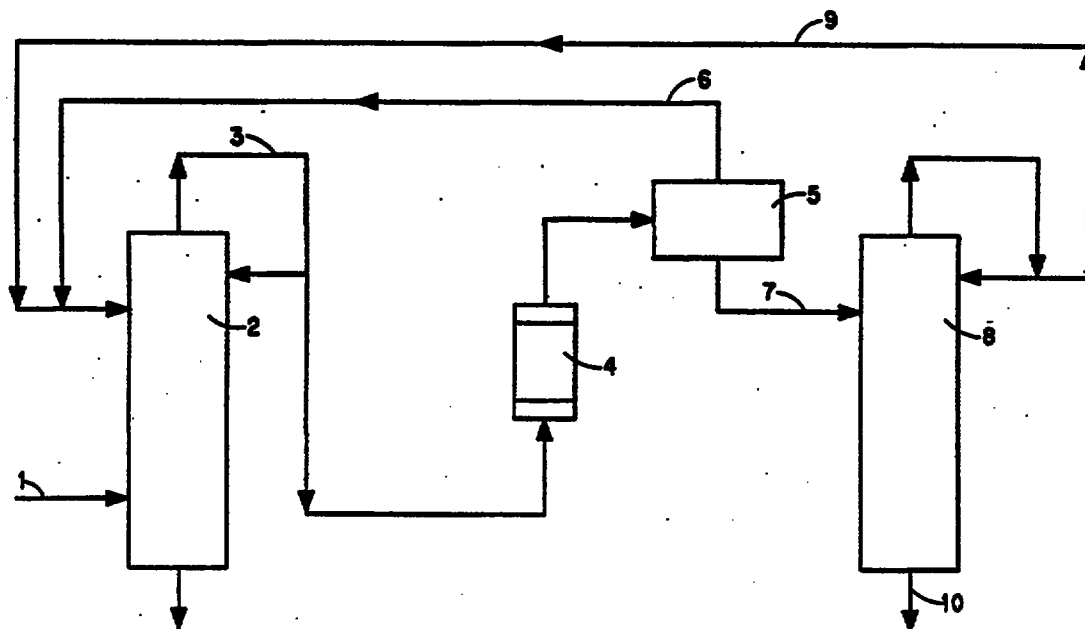
RTMP COPY
+
IPER

SG 9701148-0

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : C07C 17/386, 17/20, 17/38, 19/08		A1	(11) International Publication Number: WO 96/09271
			(43) International Publication Date: 28 March 1996 (28.03.96)
(21) International Application Number: PCT/US95/11053		(81) Designated States: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, (SG), SI, SK, TJ, TM, TT, UA, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG), ARIPO patent (KE, MW, SD, SZ, UG).	
(22) International Filing Date: 13 September 1995 (13.09.95)		Published With international search report.	
(30) Priority Data: 08/309,376 20 September 1994 (20.09.94) ✓ US			
(71) Applicant: E.I. DU PONT DE NEMOURS AND COMPANY [US/US]; 1007 Market Street, Wilmington, DE 19898 (US).			
(72) Inventors: MILLER, Ralph, Newton; 39 Hillstream Road, Newark, DE 19711-2477 (US). DeSCHERE, Mark, Richard; 4 Hidden Valley Drive, Newark, DE 19711-7464 (US). MAHLER, Barry, Asher; 104 Carter Way, Glen Mills, PA 19342-1258 (US). MUTHU, Olagappan; 108 Beech Hill Drive, Newark, DE 19711-2951 (US).			
(74) Agents: BOYER, Michael, K. et al.; E.I. du Pont de Nemours and Company, Legal/Patent Records Center, 1007 Market Street, Wilmington, DE 19898 (US).			

(54) Title: PURIFICATION PROCESS FOR HEXAFLUOROETHANE PRODUCTS



(57) Abstract

The disclosure relates to removing impurities from hexafluoroethane (CF_3CF_3), also known as Perfluorocarbon 116 (PFC-116) or Fluorocarbon 116 (FC-116), by using azeotropic distillation such that an overhead product consisting essentially of HCl-hexafluoroethane is formed, optionally combined with a phase separation step to break the HCl-hexafluoroethane azeotropic or azeotrope-like composition thereby permitting recovery of substantially pure hexafluoroethane. Unreacted hydrogen fluoride (HF) may be removed from hexafluoroethane during the above azeotropic distillation with HCl or alternatively by an azeotropic distillation wherein an HF-hexafluoroethane azeotropic or azeotrope-like composition exits overhead and substantially pure HF exits in the bottoms stream.