



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : C07C 253/34, 255/08	A1	(11) International Publication Number: WO 00/58274 (43) International Publication Date: 5 October 2000 (05.10.00)
(21) International Application Number: PCT/US00/07825 (22) International Filing Date: 24 March 2000 (24.03.00) (30) Priority Data: 09/282,877 31 March 1999 (31.03.99) US (71) Applicant: THE STANDARD OIL COMPANY [US/US]; Law Department - M/C 1907A, 200 East Randolph Drive, Chicago, IL 60601 (US). (72) Inventors: HAGANS, Michael, Keith; 2030 Idlewild Drive, Lima, OH 45805 (US). GODBOLE, Sanjay, Purushottam; 1617 West Minster Drive, Naperville, IL 60563 (US). CONTRATH, Patrick, Michael; 1021 Louis Road, Geneva, IL 60134 (US). MEIHLS, Donald, Eugene; 1800 Reservoir Road, Lot 325, Lima, OH 45804 (US). (74) Agent: NEMO, Thomas, E.; BP Amoco Corporation, Law Department - M/C 1907A, 200 East Randolph Drive, Chicago, IL 60601 (US).		(81) Designated States: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i>
(54) Title: IMPROVED PROCESS FOR THE RECOVERY OF ACRYLONITRILE AND METHACRYLONITRILE		
(57) Abstract The process of manufacturing an unsaturated mononitrile selected from the group consisting of acrylonitrile and methacrylonitrile comprising transporting a reactor effluent containing the unsaturated mononitrile to a first column where the reactor effluent is cooled with at least one aqueous stream, transporting the cooled effluent containing the unsaturated mononitrile into a second column where the cooled effluent is contacted with at least one second aqueous stream to absorb the unsaturated mononitrile into at least one second aqueous stream, transporting the second aqueous stream containing the unsaturated mononitrile from the second column to a first distillation column for separation of the crude unsaturated mononitrile from the second aqueous stream, and transporting the separated crude unsaturated mononitrile to a second distillation column to remove at least some impurities from the crude mononitrile, and transporting the partially purified crude unsaturated mononitrile to a third distillation column (product column) to further purify the crude unsaturated mononitrile, recovering the purified unsaturated mononitrile as a sidestream from the product column, introducing about 100 to about 2000 ppm of water in the form consisting of steam and distilled water into the bottom stream obtained from the product column and recycling at least part of the product bottom stream obtained from the product column to the bottom portion of the product column. In another aspect of the present invention the steam and distilled water is added directly to the product column.		