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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
18 January 2001 (18.01.2001)

PCT

(10) International Publication Number
WO 01/03823 A1

(51) International Patent Classification[7]: B01J 8/24, C07C 253/24, B01J 8/18, 19/00

(21) International Application Number: PCT/US00/14981

(22) International Filing Date: 31 May 2000 (31.05.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/352,465 13 July 1999 (13.07.1999) US

(71) Applicant: THE STANDARD OIL COMPANY [US/US]; Law Dept. - Mail Code 1907A, 200 E. Randolph Drive, Chicago, IL 60601 (US).

(72) Inventors: TROTT, Louis, Rocco; 31535 Birch Circle, Solon, OH 44139 (US). GUSTAFERRO, Robert, Angelo; 5951 Briardale Lane, Solon, OH 44139 (US). HEPFER, Robert, Paul; 7401 LaCosta Drive, Hudson, OH 44236 (US). MILLER, Craig, Timothy; 1243 Halladay Drive, Batavia, IL 60510 (US). CARLSSON, Stig-Axel; 33535 Arlesford Drive, Solon, OH 44139 (US). CLOSE, Benjamin, Wayne; 2315 Cheshire Drive, Aurora, IL 60504 (US).

(74) Agent: YUSKO, David, P.; BP Amoco Corporation, Law Dept. - Mail Code 1907A, 200 East Randolph Drive, Chicago, IL 60601 (US).

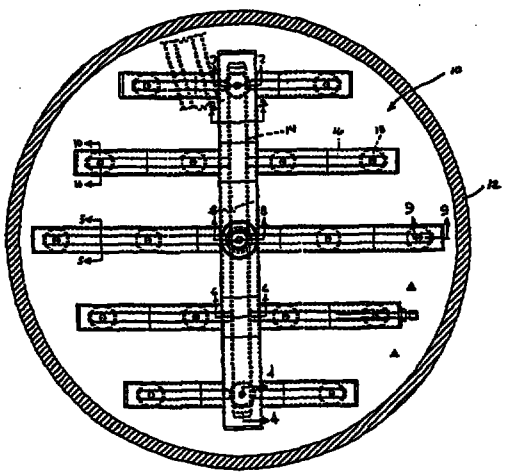
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, 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:
— *With international search report.*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SPARGER FOR OXYGEN INJECTION INTO A FLUID BED REACTOR



(57) Abstract: A sparger (10) includes a conduit for conducting an oxygen feed, a nozzle (18) connected to the conduit for passage of the oxygen feed from the conduit to the outside of the sparger, the nozzle (18) including an orifice (52) and a shroud, and insulation surrounding the conduit (14) and also the shroud (54) substantially the full length of the shroud. A method is provided for producing acrylonitrile via propane ammoxidation, comprising introducing propane and ammonia feeds into a fluid bed reactor (12), and introducing an oxygen feed into the fluid bed through at least one insulated and jacketed sparger nozzle for reacting with at least one of the propane feed and ammonia feed in the presence of a fluid bed catalyst.

WO 01/03823 A1