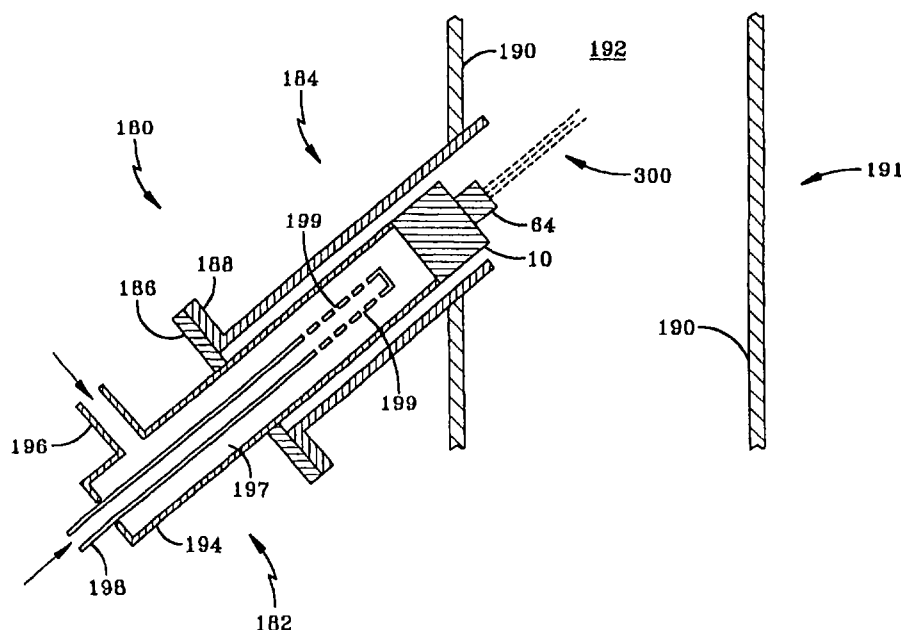




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : C10G 9/28		A1	(11) International Publication Number: WO 00/55281
			(43) International Publication Date: 21 September 2000 (21.09.00)
(21) International Application Number: PCT/US00/07024 (22) International Filing Date: 17 March 2000 (17.03.00) (30) Priority Data: 09/271,813 18 March 1999 (18.03.99) US Not furnished 16 March 2000 (16.03.00) US (71) Applicant: EXXONMOBIL RESEARCH AND ENGINEERING COMPANY [US/US]; P.O. Box 390, 180 Park Avenue, Florham Park, NJ 07932-0390 (US). (72) Inventors: KOVEAL, Russell, John, Jr.; 4723 Beech Harbor, Baton Rouge, LA 70817 (US). ITO, Jackson, I., 2507 Occidental Drive, Sacramento, CA 95826 (US). (74) Agents: CROMWELL, Michael, A. et al.; ExxonMobil Research and Engineering Company, P.O. Box 390, Florham Park, NJ 07932-0390 (US).			(81) Designated States: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TR, TT, UA, UZ, VN, YU, ZA, 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 With international search report Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.
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(54) Title: FCC PROCESS INCORPORATING ATOMIZATION OF FCC FEED OIL



(57) Abstract

A liquid atomization process comprises forming a two-phase fluid mixture of a liquid and a gas, under pressure, dividing the fluid into two separate streams which are passed into and through an impingement mixing zone (22) in which they are impingement mixed to form a single stream of two-phase fluid. The mixed, single stream is then passed into and through a shear mixing zone (24) and then into a lower pressure expansion zone (30), in which atomization occurs to form a spray of atomized drops of the liquid. The impingement (22) and shear (24) mixing zones comprise respective upstream (16) and downstream (18) portions of a single cavity (14) in a nozzle (10). This is useful for atomizing the hot oil in a FCC process.



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