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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
14 April 2011 (14.04.2011)

PCT

(10) International Publication Number
WO 2011/044201 A3

(51) International Patent Classification:
B01J 8/04 (2006.01) *B01J 19/26* (2006.01)

(21) International Application Number:
PCT/US2010/051583

(22) International Filing Date:
6 October 2010 (06.10.2010)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
12/575,334 7 October 2009 (07.10.2009) US

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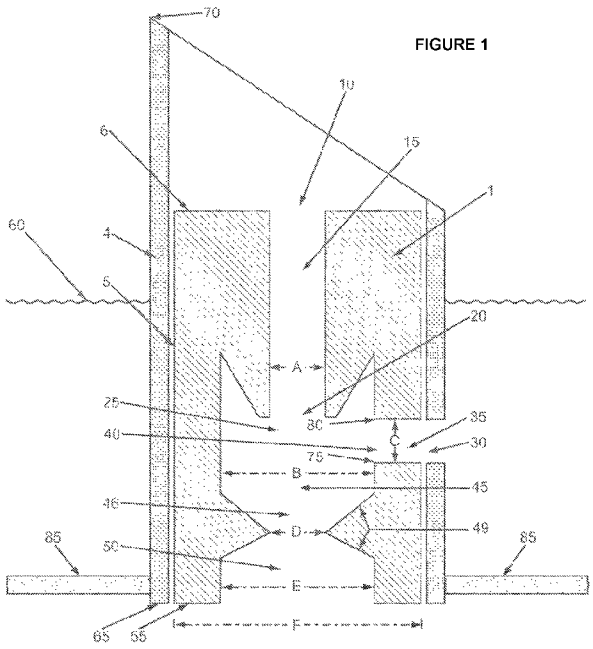
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, 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, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: FLOW DISTRIBUTION DEVICE FOR DOWNFLOW CATALYTIC REACTORS

FIGURE 1



(57) Abstract: The invention is a fluid distribution device for coupling with a fluid distribution conduit or chimney for improving the distribution of downwardly flowing poly-phase mixture including at least one gas phase and at least one liquid phase, above at least one catalyst bed of granular solid catalytic material. The fluid distribution device for receiving the liquid and gas phases has one or more openings in the top and/or upper portion of its height through which a gas phase can enter and has a gas conduit that opens to a mixing cavity within the device. The fluid distribution device further comprises one or more lateral openings for liquid ingress. The lateral opening or openings allow the liquid to enter a liquid conduit that opens to the internal mixing cavity. The mixing cavity allows intimate contact between the liquid and gas phases. Therefore the flow distribution device of the invention provides improved tolerance for tray out of levelness.

WO 2011/044201 A3

WO 2011/044201 A3

Published:

— *with international search report (Art. 21(3))*

(88) Date of publication of the international search report:
20 October 2011