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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
7 April 2016 (07.04.2016)

WIPO | PCT

(10) International Publication Number
WO 2016/054608 A1

(51) International Patent Classification:
C07C 51/12 (2006.01) *C07C 53/08* (2006.01)
C07C 51/44 (2006.01)

(21) International Application Number:
PCT/US2015/053886

(22) International Filing Date:
2 October 2015 (02.10.2015)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
62/058,936 2 October 2014 (02.10.2014) US

(71) Applicant *(for all designated States except US)*: **CELANESE INTERNATIONAL CORPORATION** [US/US]; 1601 West LBJ Freeway, Dallas, Texas 75234 (US).

(72) Inventor; and
(71) Applicant *(for US only)*: **SHAVER, Ronald David** [US/US]; 16415 Heather Bend Court, Houston, Texas 77059 (US).

(74) Agent: **COOPER, Mark L.**; 4149 Pirates Bch, Ste 115, Galveston, Texas 77554 (US).

(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, BN, 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, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, 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, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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, KM, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report (Art. 21(3))*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(54) Title: PROCESS FOR PRODUCING ACETIC ACID

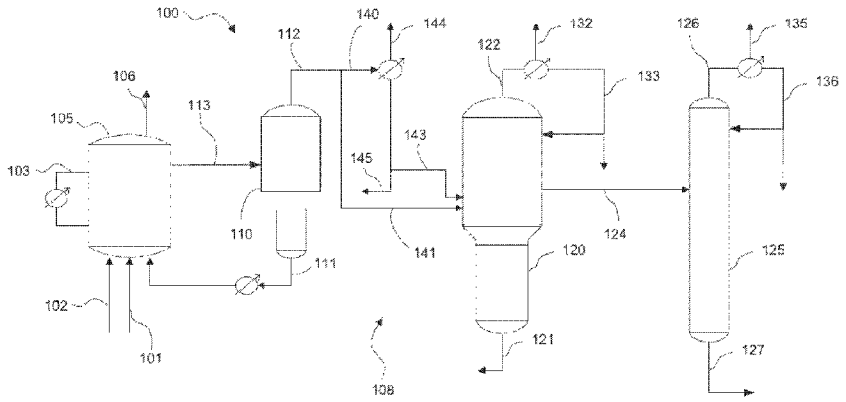

FIG. 1

(57) Abstract: Process for producing acetic acid is disclosed in which the reaction medium is separated into a liquid recycle and a vapor product stream including acetic acid, methyl iodide, methyl acetate and water in a flash vessel. The vapor product stream is condensed into a liquid stream that is enriched in acetic acid and this liquid stream is further sent to the distillation columns to recover acetic acid. The process advantageously improves the capacity of the acetic acid production while reducing the amount of acetic acid that is recycled.

WO 2016/054608 A1