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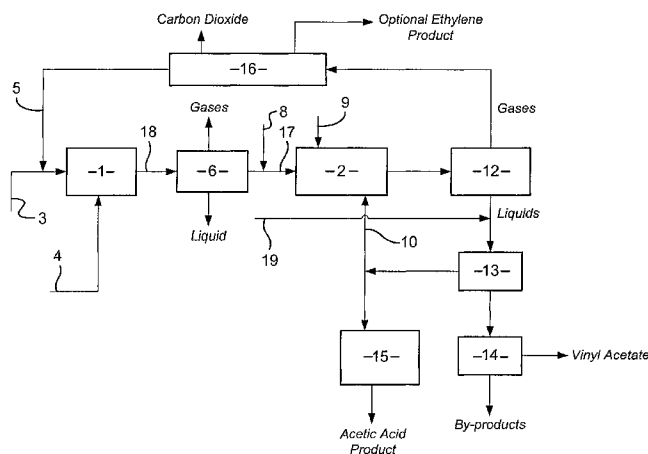
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(54) Title: INTEGRATED PROCESS FOR THE MANUFACTURE OF ALKENYL CARBOXYLATES



(57) **Abstract:** An integrated process for the production of an alkenyl carboxylate, such as vinyl acetate which process comprises the steps of (a) contacting in an oxidation reaction zone a C<sub>2</sub> to C<sub>4</sub> alkane, such as ethane, a molecular oxygen-containing gas, optionally the corresponding alkene and optionally water, in the presence of a catalyst to produce a stream comprising alkene, carboxylic acid and water; (b) separating at least a portion of the stream from step (a) into a fraction comprising the alkene and a fraction comprising the carboxylic acid and water; (c) contacting in a second reaction zone at least a portion of said alkene fraction produced in step (b), a carboxylic acid and a molecular oxygen-containing gas, in the presence of a catalyst to produce a product stream comprising an alkenyl carboxylate, water and carboxylic acid; (d) separating at least a portion of the product stream from step (c) and at least a portion of the carboxylic acid and water fraction produced in step (b) by azeotropic distillation into an overhead fraction comprising the alkenyl carboxylate and a base fraction comprising the carboxylic acid; (e) recovering the alkenyl carboxylate from the overhead fraction separated in step (d).



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**Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

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