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| (51) International Patent Classification <sup>6</sup> :<br><b>C07C 7/00</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>A1</b> | (11) International Publication Number: <b>WO 96/40604</b><br>(43) International Publication Date: 19 December 1996 (19.12.96)                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| (21) International Application Number: ✓ PCT/US96/06479<br>(22) International Filing Date: ✓ 6 May 1996 (06.05.96)<br>(30) Priority Data:<br>✓ 08/477,423 ✓ 7 June 1995 (07.06.95) ✓ US<br>(71) Applicant: ✓ ELCOR CORPORATION [US/US]; Wellington Center, Suite 1000, 14643 Dallas Parkway, Dallas, TX 75240-8871 (US).<br>(72) Inventors: ✓ CAMPBELL, Roy, E.; 1600 W. Cuthbert, Midland, TX 79701 (US). ✓ WILKINSON, John, D.; 2800 W. Dengar, Midland, TX 79705 (US). ✓ HUDSON, Hank, M.; 2508 Sinclair, Midland, TX 79701 (US).<br>(74) Agents: MURNANE, John, D. et al.; 44th floor, 30 Rockefeller Plaza, New York, NY 10112-0228 (US).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           | (81) Designated States: AL, AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TR, TT, UA, UG, UZ, VN, ARIPO patent (AE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).<br><br>Published<br>With international search report. |
| (54) Title: <b>HYDROCARBON GAS PROCESSING</b> ✓<br>(57) Abstract<br><p>A process for the recovery of propane, propylene and heavier hydrocarbon components from a hydrocarbon gas stream is disclosed. The stream is cooled and/or expanded to partially condense it, then separated to provide a first vapor stream. The first vapor stream is directed into a contacting device whereby a third vapor stream and a C<sub>3</sub>-containing liquid stream are formed. The C<sub>3</sub>-containing liquid stream is directed to a distillation column wherein a second vapor stream is separated to recover a product containing the major portion of the C<sub>3</sub> components and heavier hydrocarbon components. The second vapor stream is directed into heat exchange relation with the third vapor stream to cool the second vapor stream and condense at least a part of it, forming a condensed stream. At least a portion of the condensed stream is directed to the contacting device to intimately contact the first vapor stream; the remaining portion of the condensed stream is supplied to the distillation column as its top feed. The quantities and temperatures of the feeds to the contacting device and the distillation column are effective to maintain the overhead temperatures of the contacting device and the distillation column at temperatures whereby the major portion of the desired components is recovered.</p> |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |