

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
19 January 2006 (19.01.2006)

PCT

(10) International Publication Number
WO 2006/005269 A3

(51) International Patent Classification:

C01B 3/32 (2006.01) **C07C 51/12** (2006.01)
C01B 3/50 (2006.01) **C07C 67/05** (2006.01)

(21) International Application Number:

PCT/CY2005/000001

(22) International Filing Date: 23 June 2005 (23.06.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/586,547 9 July 2004 (09.07.2004) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

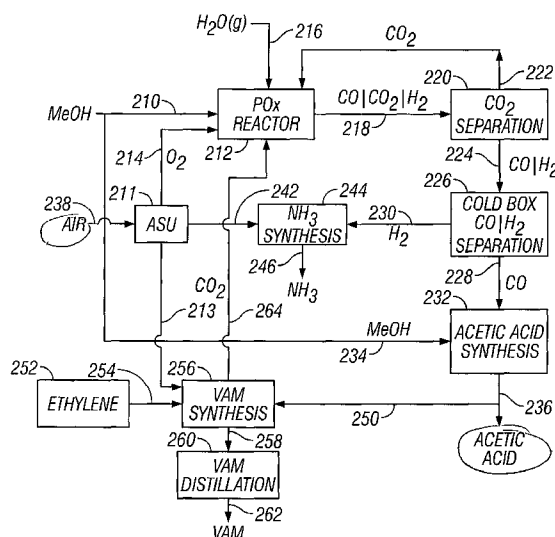
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:

6 July 2006

[Continued on next page]

(54) Title: PREPARATION OF SYNGAS FOR ACETIC ACID SYNTHESIS BY PARTIAL OXIDATION OF METHANOL FEEDSTOCK



(57) Abstract: A method for the production of syngas from methanol feedstock is disclosed. The methanol feed (110) is supplied to a partial oxidation reactor (112) with oxygen (114) and optionally steam (116) to yield a mixed stream (118) of hydrogen, carbon monoxide, and carbon dioxide. The carbon dioxide (122) is separated out and the hydrogen and carbon monoxide mixture (124) is fed to a cold box (126) where it is separated into hydrogen-rich and carbon monoxide-rich streams (130, 128). The separated carbon dioxide (122) can be recycled back to the partial oxidation reactor (112) as a temperature moderator if desired. The carbon monoxide-rich stream (128) can be reacted with methanol (134) in an acetic acid synthesis unit (132) by a conventional process to produce acetic acid (136) or an acetic acid precursor. Optionally, an ammonia synthesis unit (144) and/or vinyl acetate monomer synthesis unit (156) can be integrated into the plant.

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