

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
2 August 2001 (02.08.2001)

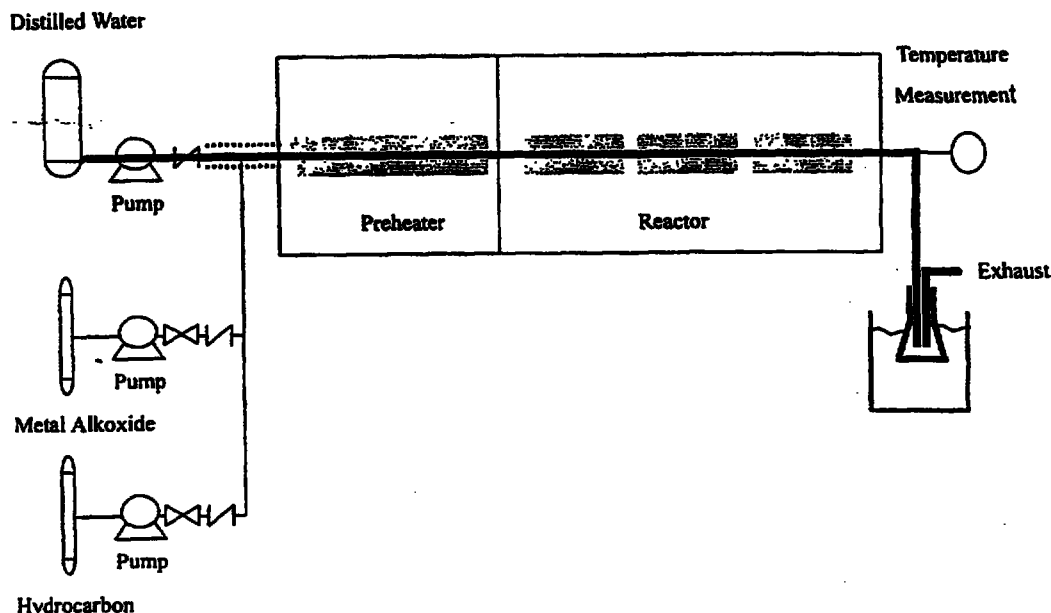
PCT

(10) International Publication Number
WO 01/54829 A1

- (51) International Patent Classification⁷: **B05D 7/22** (74) Agent: **KIM, Seong, Taik**; KukDong Building, 14th Floor, 60-1, Chungmuro 3-ka, Chung-ku, Seoul 100-705 (KR).
- (21) International Application Number: **PCT/KR00/01157**
- (22) International Filing Date: 17 October 2000 (17.10.2000)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
2000-4328 28 January 2000 (28.01.2000) KR
- (71) Applicant: **SK CORPORATION [KR/KR]**; 99 Seorindong, Jongro-u, Seoul 110-110 (KR).
- (72) Inventors: **KANG, Sin, Cheol**; Mokdong Woosung 2-Cha Apt. 202-303, 337, Shinjung 7-dong, Yangchun-gu, Seoul 158-776 (KR). **CHOI, Ahn, Seop**; Daewo Apt. 101-304, 426 Hwabong-dong, Buk-gu, Ulsan 683-300 (KR). **CHO, Dong, Hyun**; 750-3, Junha-dong, Dong-gu, Ulsan 682-061 (KR). **CHOI, Sun**; Hanuri Apt. 6-306, Hwabong-dong, Buk-gu, Ulsan 683-300 (KR).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report

[Continued on next page]

(54) Title: COATING METHOD ON THE INNER WALLS OF THE REACTION TUBES IN A HYDROCARBON PYROLYSIS REACTOR



(57) Abstract: A method of on-line coating a coat film on the inner wall of a reaction tube in a hydrocarbon pyrolysis reactor for preventing the formation and the deposit of coke on the inner walls. This method comprises the steps of vapor depositing a mixed solution of a metal alkoxide and a chromic compound on the inner walls concurrently with introducing a carrier at a flow rate of 1-5000 kg/hr/coil at a temperature of 600-900 °C under a pressure of 0-3 kg/cm² to form a buffer layer on the inner walls; and vapor depositing a metal alkoxide as a barrier on the buffer layer; and vapor depositing an alkali metal/alkaline earth metal compound alone or mixed with metal alkoxide as a decoking layer on the barrier. A decoking layer may further be provided on the diffusion barrier.

WO 01/54829 A1

2

5

6