



(51) International Patent Classification:
C01B 31/10 (2006.01) *B01J 8/10* (2006.01)

(21) International Application Number:
PCT/IN2008/000774

(22) International Filing Date:
18 November 2008 (18.11.2008)

(25) Filing Language: English

(26) Publication Language: English

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(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, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ,

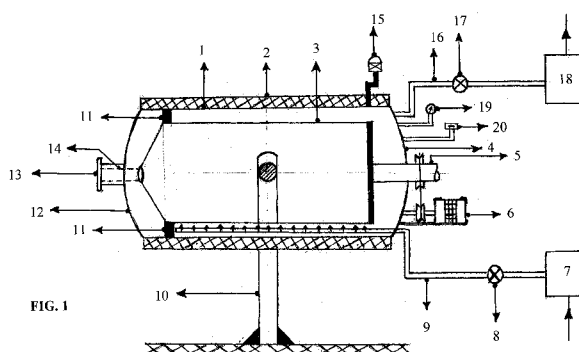
EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, 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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, 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 (Art. 21(3))
- with amended claims and statement (Art. 19(1))

(54) Title: A PROCESS AND AN APPARATUS FOR CONVERTING SOLID ORGANIC MATERIALS INTO CARBON OR ACTIVATED CARBON



(57) Abstract: A process and an apparatus for converting solid organic materials into carbon or activated carbon. The processing of solid organic materials is oxygen-free and wholly under endothermic condition. The apparatus comprises a pressure vessel (1), thermal insulation with protective cladding for pressure vessel (2), a perforated or non-perforated rotary drum (3), a sealed dish end (4), a rotating shaft (5), a geared motor with belt or chain drive (6), a steam super heater (7) for generating superheated steam, at least one inlet valve (8) for regulating the super heated steam, at least one feed pipe (9), tilting or swivel support (10), at least one cylindrical roller (11), an open or close door end (12), a feeding or removal port (13), a connecting chute (14), at least one pressure safety valve (15), a gas exit pipe (16), at least one outlet valve (17), a gas treatment unit (18) for treating the generated reaction gases, at least one pressure gauge (19) and at least one temperature indicator (20). The pressure vessel is tilted along with its accessories supported on a tilting or swivel support and solid organic materials are fed into the rotary drum and then re-aligned. Gas or steam is feeded inside the pressure vessel till the entire air inside the pressure vessel is purged out and thereafter superheated steam continuously feeded into the rotary drum. The rotary drum is constantly rotated by geared motor and generated reaction gases are evacuated from the pressure vessel to the gas treatment unit wherein the organic solid materials are converted into carbon or activated carbon.