



(51) International Patent Classification:

C10J 3/26 (2006.01) C10J 3/74 (2006.01)
C10J 3/32 (2006.01) C10J 3/82 (2006.01)

(21) International Application Number:

PCT/GB2008/050847

(22) International Filing Date:

22 September 2008 (22.09.2008)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

0718663.8 25 September 2007 (25.09.2007) GB

(71) Applicant (for all designated States except US): **REF-GAS LIMITED** [GB/GB]; Whittle Close, Sandycroft, Deeside, Flintshire Clwyd CH5 2QE (GB).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **WILLACY, George** [GB/GB]; 5 Victoria Crescent, Chester Cheshire CH4 7AH (GB).

(74) Agent: **AUSTIN, Hedley William**; Chapman Molony, Cardiff Business Technology Centre, Senghennydd Road, Cardiff South Wales CF24 4AY (GB).

(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).

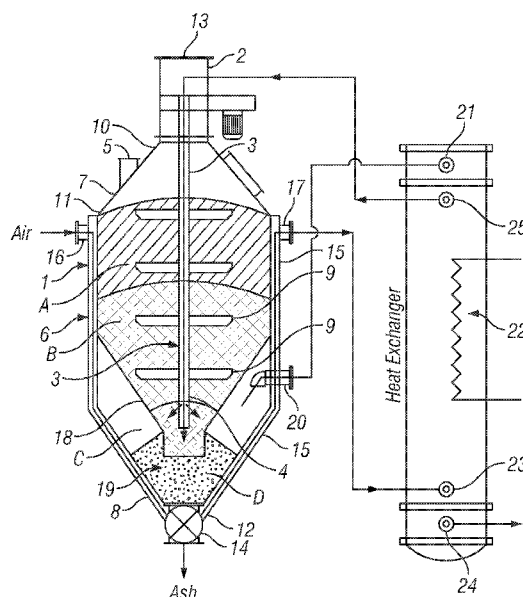
Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

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

13 August 2009

(54) Title: DOWNDRAFT REFUSE GASIFICATION



(57) Abstract: In the gasification process, shredded municipal waste is allowed to descend through a pyrolysis reactor (1) and the waste is pyrolysed in the reactor to form a combustible gas. The waste is contacted in a downdraft with an air supply (16) which has been preheated by heat exchange with the pyrolysis reactor (1) and further heated by heat exchange (22) with combustible exhaust gas (20) from the pyrolysis reactor (1).