



(51) International Patent Classification:

B09B 3/00 (2006.01) *C08J 11/10* (2006.01)
B29B 17/02 (2006.01) *F23G 5/033* (2006.01)
B01J 19/08 (2006.01) *F27D 11/06* (2006.01)
C10B 53/00 (2006.01)

(21) International Application Number:

PCT/SG2013/000239

(22) International Filing Date:

7 June 2013 (07.06.2013)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

201204222-2 7 June 2012 (07.06.2012) SG

(71) Applicant: AEL ENVIRO (ASIA) PTE LTD [SG/SG];
 120, Pioneer Road #01-03, Singapore 639597 (SG).

(72) Inventors; and

(71) Applicants : TAN, Hiang Mong [SG/SG]; Blk 73, Marine Drive #21-57, Singapore 440073 (SG). TAN, Tiam Kwei [SG/SG]; Blk 53, Lor 5 Toa Payoh #10-18, Singapore 310053 (SG).

(74) Agent: YUSARN AUDREY; 24 Raffles Place, #27-01 Clifford Centre, Singapore 048621 (SG).

(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, BN, BR, BW, BY, BZ, CA, CH, CL, 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, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

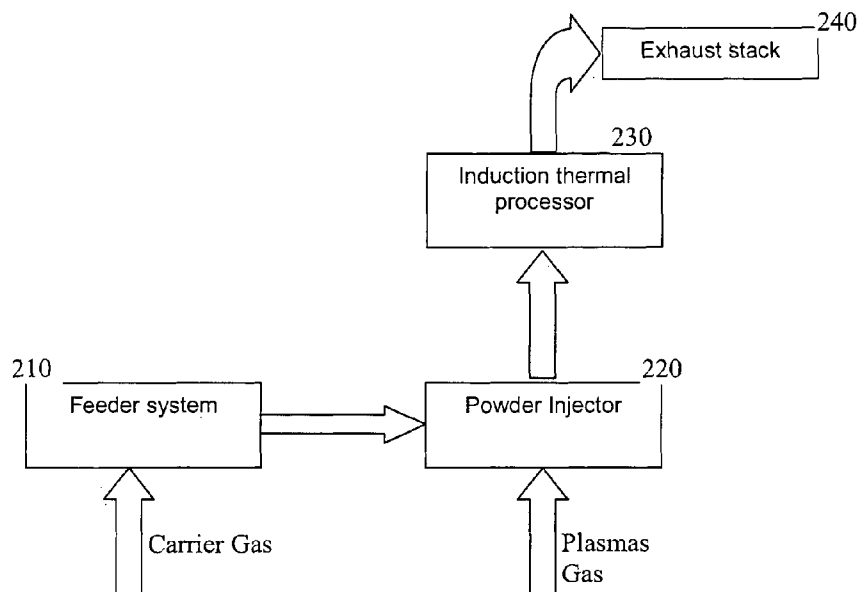
Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

Published:

— with international search report (Art. 21(3))

(54) Title: PLASMA PYROLYSIS SYSTEM AND METHOD FOR TYRES



(57) Abstract: A system and method for converting waste tyres into syngas and carbon black is disclosed comprising means for comminuting rubber from waste tyres into a powder; a feeding system for feeding the powder into a powder injector, a powder injector for injecting the powder into a plasma thermal processor; and an induction thermal processor for producing syngas. The plasma thermal processor consists of a plasma torch and an RF induction coil and the induction thermal processor comprises a chamber and a LF induction coil.