



(51) International Patent Classification:

B01D 50/00 (2006.01) **A47L 9/10** (2006.01)
B01D 36/00 (2006.01) **B01D 45/12** (2006.01)
B01D 46/00 (2006.01)

(21) International Application Number:

PCT/SG2010/000428

(22) International Filing Date:

12 November 2010 (12.11.2010)

(25) Filing Language:

English

(26) Publication Language:

English

(71) Applicant (for all designated States except US): **KRANJI SOLUTIONS PTE LTD** [SG/SG]; 28 Sin Ming Lane, #04-145 Midview City, Singapore 573972 (SG).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **VAN VORSELEN, Michel** [NL/SG]; c/o Kranji Solutions Pte Ltd, 28 Sin Ming Lane, #04-145 Midview City, Singapore 573 972 (SG).

(74) Agent: **MCLAUGHLIN, Michael Gerard**; McLaughlin IP Pte. Ltd., 24A Mosque Street, Singapore 059 504 (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, 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, 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, PE, PG, PH, PL, PT, RO, RS, RU, 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, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, ML, MR, NE, SN, TD, TG).

Published:

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

(54) Title: APPARATUS AND METHODS FOR FILTRATION OF SOLID PARTICLES AND SEPARATION OF LIQUID DROPLETS AND LIQUID AEROSOLS FROM A GAS STREAM

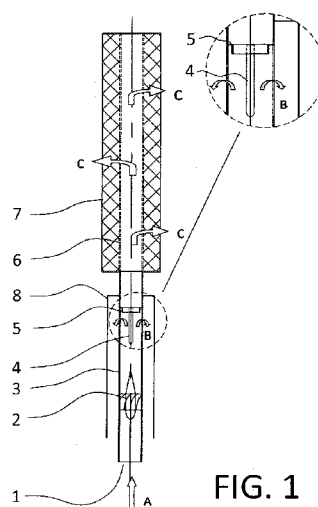


FIG. 1

(57) Abstract: An apparatus for filtration of solid particles and separation of liquid droplets and liquid aerosols from a gas stream for installation in a vessel comprises a cyclonic separator for coarse separation of solid particles and separation of liquid droplets and liquid aerosols from the gas stream. The cyclonic separator has one or more slots or perforations. A filter element for fine filtration from the gas stream has an inlet for receipt of the gas stream directly from a gas outlet of the cyclonic separator. A shroud partitions the one or more slots or perforations from a dry gas volume of the vessel.