

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
15 April 2004 (15.04.2004)

PCT

(10) International Publication Number
WO 2004/030797 A1

(51) International Patent Classification⁷: **B01D 53/60**

(74) Agent: **OGILVY RENAULT**; Suite 1600, 1981 McGill College Avenue, Montreal, Québec H3A 2Y3 (CA).

(21) International Application Number:
PCT/CA2003/001508

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 1 October 2003 (01.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/260,465 1 October 2002 (01.10.2002) US

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant: **AIRBORNE POLLUTION CONTROL INC.** [CA/CA]; c/o # 205-6223-2nd Street S.E., Calgary, Alberta T2H 1J5 (CA).

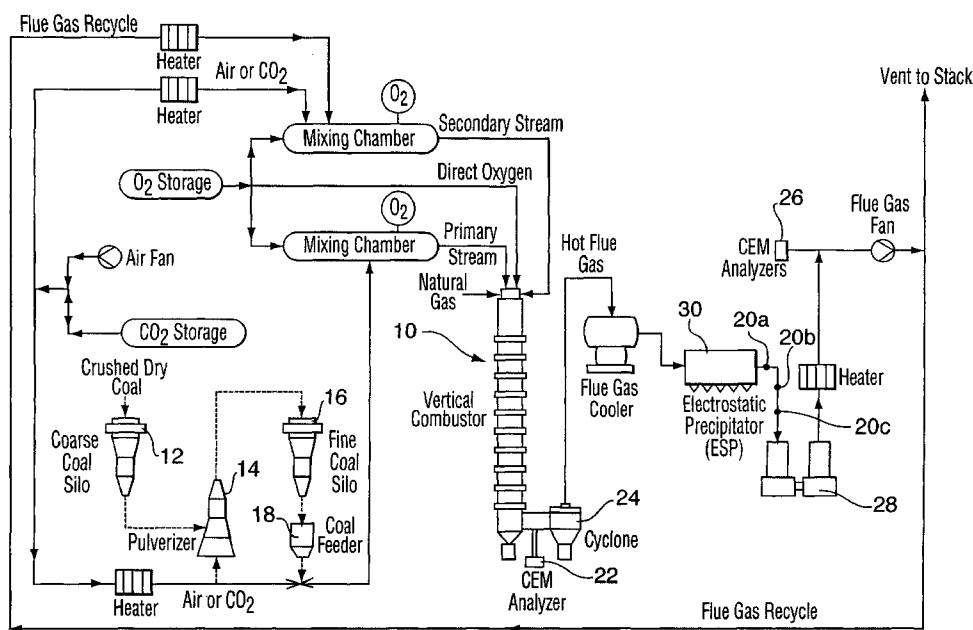
(72) Inventors: **MORTSON, Murray**; c/o # 205-6223-2nd Street S.E., Calgary, Alberta T2H 1J5 (CA). **BICHEL, Joe**; c/o # 205-6223-2nd Street S.E., Calgary, Alberta T2H 1J5 (CA). **SCHAAF, Stephen**; c/o # 205-6223-2nd Street S.E., Calgary, Alberta T2H 1J5 (CA). **JOHNSON, Dennis**; c/o # 205-6223-2nd Street S.E., Calgary, Alberta T2H 1J5 (CA).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: FLUE GAS PURIFICATION METHOD



(57) Abstract: A method of scrubbing SO_x, NO_x compounds and other air toxins from a flue gas stream. In the method, two distinct unit operations are amalgamated to scrub SO_x, NO_x and other air toxins compounds from a flue gas stream. More specifically, there is a dry scrubbing operation and a wet scrubbing operation. The dry injection scrubbing operation involves contacting a flue gas stream containing SO_x and NO_x compounds with a sorbent for removing substantially all of the SO_x and NO_x compounds present in the stream. The second wet scrubbing operation involves contacting the stream to remove any residual SO_x, NO_x compounds, and other air toxins remaining in the stream.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.