



(43) International Publication Date
13 September 2012 (13.09.2012)

- (51) International Patent Classification:
G05D 11/13 (2006.01) *B01F 3/02* (2006.01)
- (21) International Application Number:
PCT/US2012/026545
- (22) International Filing Date:
24 February 2012 (24.02.2012)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
13/045,174 10 March 2011 (10.03.2011) US
- (71) Applicant (for all designated States except US):
PRAXAIR TECHNOLOGY, INC. [US/US]; 39 Old Ridgebury Road, Danbury, CT 06810 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **SONG, Xuemei** [CN/US]; 39 Wyndrock Lane, East Amherst, NY 14051 (US). **BROWN, Lloyd, Anthony** [JM/US]; 63 Echowood Drive, East Amherst, NY 14051 (US). **SCHULTE, Thomas** [US/US]; 2550 East River Road, Grand Island, NY 14072 (US).
- (74) Agents: **DALAL, Nilay S.** et al.; Praxair, Inc., 39 Old Ridgebury Road, Danbury, CT 06810 (US).
- (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, 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, 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).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

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

(54) Title: DYNAMIC GAS BLENDING

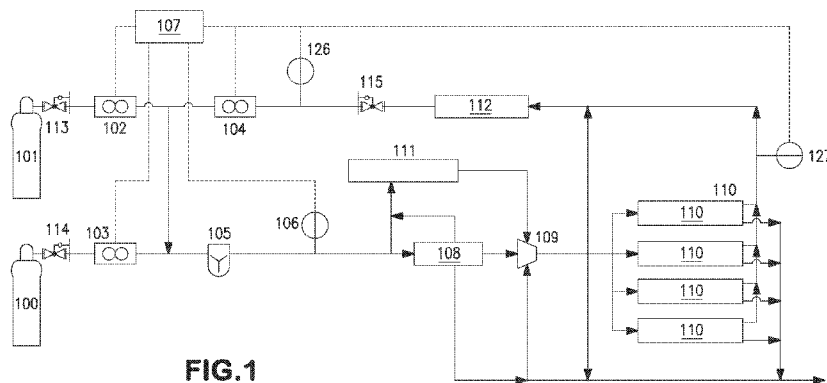


FIG.1

(57) Abstract: A dynamic gas blending method for adjusting a concentration of an off-spec gas mixture to a target concentration, comprising the steps of : recycling the off-spec gas mixture upstream of a mixer, wherein the off-spec gas mixture includes a gaseous component at an off-spec concentration; regulating a flow rate of an active gas using a first flow control device, wherein the active gas includes the gaseous component at a concentration greater than the off-spec concentration; regulating a flow rate of a balance gas using a second flow control device, and re-blending the off-spec gas mixture with the active and the balance gases to create a resultant mixture at the target concentration.

