

(51) International Patent Classification:
E21B 43/40 (2006.01)(21) International Application Number:
PCT/US2010/041548(22) International Filing Date:
9 July 2010 (09.07.2010)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/238,971 1 September 2009 (01.09.2009) US(71) Applicant (for all designated States except US):
EXXONMOBIL UPSTREAM RESEARCH COMPANY [US/US]; CORP-URC-SW-359, P.O.Box 2189, Houston, TX 77252-2189 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **RASMUSSEN, Chad** [US/US]; 1815 Bethlehem St., Houston, TX 77018 (US). **HUNTINGTON, Richard A.** [US/US]; 12714 Autumn Crest Drive, Oak Hill, VA 20171 (US). **O'DEA, Dennis** [US/US]; 8 Courtney Lane, Somerset, NJ 08873-6053 (US). **MITTRICKER, Franklin F.** [US/US]; 14777 Presilla Drive, Jamul, CA 91935 (US). **HERSHKOWITZ, Frank** [US/US]; 509 Lyon Road, Liberty Corners, NJ 07938 (US).(74) Agents: **McARTHUR, Douglas W.** et al.; Exxonmobil Upstream Research Company, CORP-URC-SW-359, P.O.Box 2189, Houston, TX 77252-2189 (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, 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, 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: LOW EMISSION POWER GENERATION AND HYDROCARBON RECOVERY SYSTEMS AND METHODS

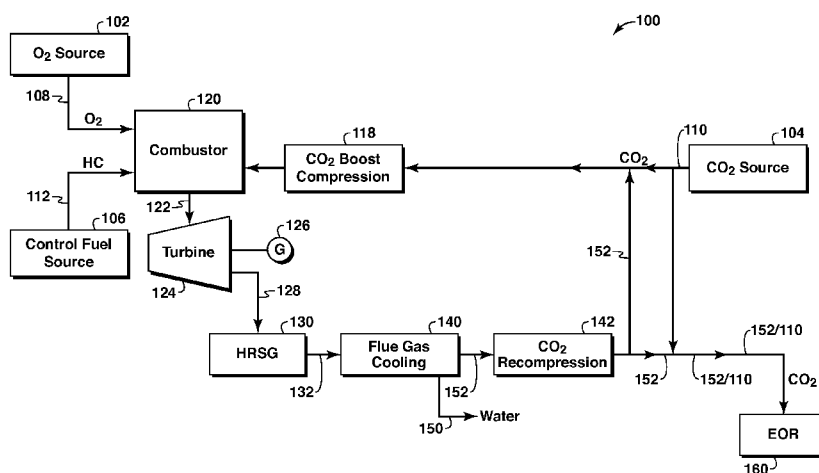


FIG. 1

(57) Abstract: Methods and systems for oxyfuel based low emission power generation in hydrocarbon recovery processes are provided. One system includes a plenum and is configured to encourage post-combustor conversion of gaseous components such that a desired chemical state is achieved. Another system includes a steam reformer for reforming a control fuel stream to generate a reformed control fuel stream characterized by an increase in hydrogen, as compared to the control fuel stream.