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61/542,031 30 September 2011 (30.09.2011) US(71) Applicant (for all designated States except US): **EXXON-MOBIL UPSTREAM RESEARCH COMPANY** [US/US]; Corp-urc-sw359, P.o.box 2189, Houston, TX 2189 (US).

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(54) Title: SYSTEMS AND METHODS FOR CONTROLLING STOICHIOMETRIC COMBUSTION IN LOW EMISSION TURBINE SYSTEMS

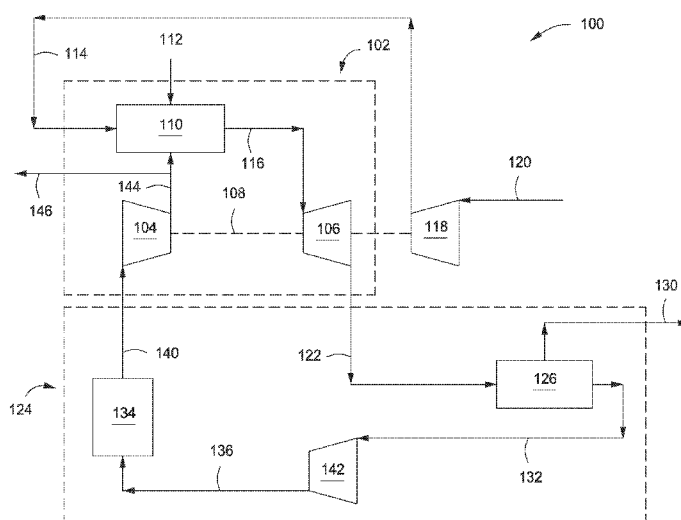


FIG. 1

(57) Abstract: Systems, methods, and apparatus are provided for controlling the oxidant feed in low emission turbine systems to maintain stoichiometric or substantially stoichiometric combustion conditions. In one or more embodiments, such control is achieved by diverting a portion of the recirculating exhaust gas and combining it with the oxidant feed to maintain a constant oxygen level in the combined oxidant-exhaust stream fed to the combustion chamber.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 12/27772

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - F02B 47/08 (2012.01)

USPC - 123/568.15

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8): F02B 47/08 (2012.01)

USPC: 123/568.15

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

USPC: 123/568.11, 568.12, 568.15, 568.21, 568.22, 568.31

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PubWEST(PGPB,USPT,USOC,EPAB,JPAB); Google Scholar;

Search Terms Used: Stoichiomet\$4, combust\$4, gas adj turbine, stag\$4, upstream, compress\$4, mix\$4, recycd\$4, exhaust\$4

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2009/0284013 A1 (Anand et al.) 19 November 2009 (19.11.2009) figs.1-4 and para [0036]	1-29
Y	US 20110027018 A1 (Herschkowitz et al.) 06 January 2011 (06.01.2011) figs. 1-5 and para [0047]	1-29
Y	US 2005/0022499 A1 (Beloken et al.) 03 February 2005 (03.02.2005) fig. 2 and para [0009]	9, 21, 22
Y	US 2008/0309087 A1 (Evulet et al.) 18 December 2008 (18.12.2008) figs.1-4 and para [0028]	7, 8, 19, 20
Y	US 2006/0037337 A1 (Lear et al.) 23 February 2006 (23.02.2006) fig.2 and para [0020]	10-12, 23-25
Y	US 2008/0066443 A1 (Fruttschi et al.) 20 March 2008 (20.03.2008) fig.1 and para [0004]	11, 24, 26-29
A	US 2008/0104958 A1 (Finkenwrath et al.) 08 May 2008 (08.05.2008) figs.1-3 and para [0035]-[0038]	1-29
A	US 2006/0260290 A1 (Rao) 23 November 2006 (23.11.2006) figs.1-3 and para [0017]-[0019]	1-29

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