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[Continued on next page]

(54) Title: GASIFICATION SYSTEM AND METHOD

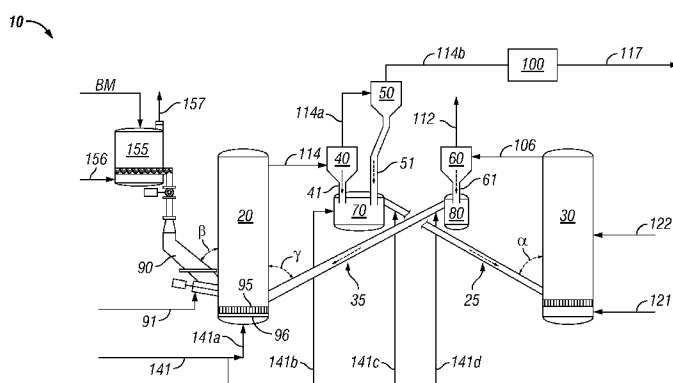


FIG. 1

(57) Abstract: A system configured for the production of at least one product selected from the group consisting of syngas, Fischer-Tropsch synthesis products, power, and chemicals, the system comprising a dual fluidized bed gasification apparatus and at least one apparatus selected from power production apparatus configured to produce power from the gasification product gas, partial oxidation reactors configured for oxidation of at least a portion of the product gas, tar removal apparatus configured to reduce the amount of tar in the product gas, Fischer-Tropsch synthesis apparatus configured to produce Fischer-Tropsch synthesis products from at least a portion of the product gas, chemical production apparatus configured for the production of at least one non-Fischer-Tropsch product from at least a portion of the product gas, and dual fluidized bed gasification units configured to alter the composition of the product gas. Methods of operating the system are also provided.



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INTERNATIONAL SEARCH REPORT

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PCT/US2012/048715**A. CLASSIFICATION OF SUBJECT MATTER***C10J 3/48(2006.01)i, C10J 3/72(2006.01)i, C10G 2/00(2006.01)i, C07C 1/04(2006.01)i, F02C 3/28(2006.01)i*

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)

C10J 3/48; B01J 23/80; C10J 3/46; C01B 3/38; C07C 27/00; B01J 8/18; C07C 1/02; C25B 1/02; C07C 1/04; B01J 8/00

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: dual fluidized bed gasification, gasifier, combustor, heat particulate heat transfer, carbonaceous, hydrogen, monoxide, power, Fischer-Tropsch synthesis

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2010-0181539 A1 (APANEL, GEORGE et al.) 22 July 2010 See abstract, paragraphs [0028], [0032], [0043], [0047], [0049], [0052], [0058], [0059], [0060], [0061], [0084], [0087], [0089], [0093], [0097], [0108] and figures 2, 4 - 6.	1-3, 5-6, 12, 15-18, 20
Y		4
A		7-11, 13-14, 19, 21
Y	EP 153780 A2 (SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ B.V.) 04 September 1985 See abstract, page 1, lines 1 - 8 and page 3, lines 6 - 15.	4
A	US 2011-0147666 A1 (TROXCLAIR, EMILE J.) 23 June 2011 See paragraphs [0013], [0021], [0022], [0025] - [0028], claims 1, 4, 13 and figure 1.	1-21
A	US 6025403 A (MARLER, DAVID OWEN et al.) 15 February 2000 See abstract and claim 1.	1-21
A	US 7291255 B2 (FUJIMURA, HIROYUKI et al.) 06 November 2007 See abstract and claim 1.	1-21

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

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