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— of inventorship (Rule 4.17(iv))

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(54) Title: METHODS AND APPARATUS FOR SOLID CARBONACEOUS MATERIALS SYNTHESIS GAS GENERATION

(57) Abstract: Methods and apparatus may permit the generation of consistent output synthesis gas from highly variable input feedstock solids carbonaceous materials. A stoichiometric objectivistic chemic environment may be established to stoichiometrically control carbon content in a solid carbonaceous materials gasifier system. Processing of carbonaceous materials may include dominative pyrolytic decomposition and multiple coil carbonaceous reformation. Dynamically adjustable process determinative parameters may be utilized to refine processing, including process utilization of negatively electrostatically enhanced water species, process utilization of flue gas (9), and adjustment of process flow rate characteristics. Recycling may be employed for internal reuse of process materials, including recycled negatively electrostatically enhanced water species, recycled flue gas (9), and recycled contaminants. Synthesis gas generation may involve predetermining a desired synthesis gas for output and creating high yields of such a predetermined desired synthesis gas.



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US07/66466

A. CLASSIFICATION OF SUBJECT MATTER

IPC: **C01B 3/02**(2006.01)

USPC: 48/61;252/373

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)

U.S. : 48/61; 252/373

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
none

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
none

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,790,383 B2 (KIM) 14 September 2004 (14-09-2004), column 3, line 1 to column 4, line 36.	1-801
Y	US 6,863,878 B2 (KLEPPER) 08 March 2005 (08-03-2005), column 1, line 64 to col. 4, line 59 and the Figure.	1-801

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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"X"

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document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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