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(54) **Title:** CATALYTIC GASIFICATION PROCESS WITH RECOVERY OF ALKALI METAL FROM CHAR

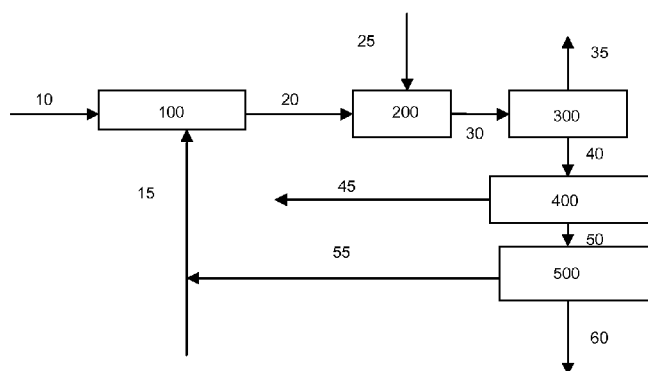


Figure 1

(57) **Abstract:** Processes are described for the extraction and recovery of alkali metal from the char that results from catalytic gasification of a carbonaceous material. Among other steps, the processes of the invention include a hydrothermal leaching step in which a slurry of insoluble particulate comprising insoluble alkali metal compounds is treated with carbon dioxide and steam at elevated temperatures and pressures to effect the conversion of insoluble alkali metal compounds to soluble alkali metal compounds. Further, processes are described for the catalytic gasification of a carbonaceous material where a substantial portion of alkali metal is extracted and recovered from the char that results from the catalytic gasification process.



## INTERNATIONAL SEARCH REPORT

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**A. CLASSIFICATION OF SUBJECT MATTER**  
 INV. C10J3/00 C10J3/46

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

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

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

EPO-Internal, COMPENDEX, WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4 459 138 A (SOUNG WEN Y [US]) 10 July 1984 (1984-07-10) figure 1 claims 1,7 column 6, lines 35-60	1-10
Y	US 2007/277437 A1 (SHEETH ATUL C [US]) 6 December 2007 (2007-12-06) cited in the application figure 1 paragraphs [0040], [0047]	1-10
A	US 4 260 421 A (BROWN LEO D; EAKMAN JAMES M; NAHAS NICHOLAS C; CLAVENNA LEROY R) 7 April 1981 (1981-04-07) figure 1	1-10

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

☒ See patent family annex.

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- \* & \* document member of the same patent family

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

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