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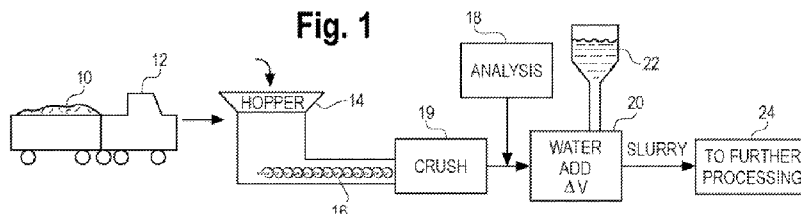
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(54) Title: CONSTANT SPECIFIC GRAVITY HEAT MINIMIZATION



$$\Delta V = V_t \cdot \left( \frac{\left( \frac{m_o + m_a}{\rho_w \cdot V_t} \right) - SG_{mix}}{SG_{mix} - 1} \right) + \frac{m_a}{\rho_w}$$

(57) Abstract: A process of regulating the water content of water-fluidized oil sand ore during processing of the ore is disclosed. The weight ( $m_o$ ) of a sample charge of oil sand ore having a bulk volume ( $V_t$ ) is determined. The inter granular voids of the sample charge are then filled with water, and the weight ( $m_a$ ) of the added inter granular water is determined. A target specific gravity value ( $SG_{mix}$ ) is selected for the fluidized oil sand ore. The volume of additional water,  $\Delta V$ , to add to a sample charge of bulk volume  $V_t$ , to achieve the target specific gravity value ( $SG_{mix}$ ) is calculated by solving the above equation. The determined volume  $\Delta V$  of additional water per bulk volume  $V_t$  of oil sand ore to be processed is added to the oil sand ore, producing water-fluidized oil sand ore. The ore is then processed to concentrate the bitumen.



**INTERNATIONAL SEARCH REPORT**

International application No  
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**A. CLASSIFICATION OF SUBJECT MATTER**  
 INV. C10G1/00 C10G1/04 E21B43/12 E21B43/16 E21B43/29  
 C10C3/00  
 ADD.  
 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)  
 C10G E21B C10C

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

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3 558 469 A (WHITE CHESTER N ET AL) 26 January 1971 (1971-01-26) the whole document	1-10
A	US 3 530 041 A (ERSKINE HAROLD L ET AL) 22 September 1970 (1970-09-22) the whole document	1-10
A	US 3 004 544 A (GUPTILL JR FRANK E) 17 October 1961 (1961-10-17) the whole document	1-10

Further documents are listed in the continuation of Box C.

See patent family annex.

\* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier document but published on or after the international filing date	"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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"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search  1 July 2011	Date of mailing of the international search report  25/07/2011
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# INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 3558469	A 26-01-1971	CA 922254 A1	06-03-1973
US 3530041	A 22-09-1970	NONE	
US 3004544	A 17-10-1961	NONE	