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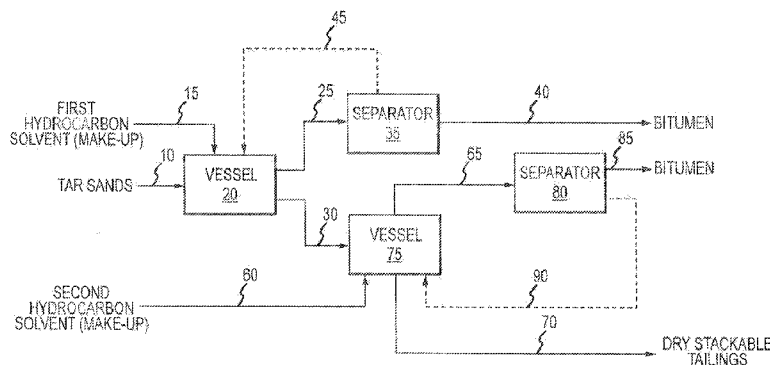


FIG. 1

(57) Abstract: Various methods and systems for obtaining bitumen from tar sands are disclosed. The disclosed methods and/or systems can be used to economically achieve a high degree of bitumen recovery from tar sands. The method may include a primary leaching or extraction process that separates most of the bitumen from the tar sands and results in a bitumen-enriched component and a bitumen-depleted component. The bitumen-enriched component includes mainly solvent and bitumen. The bitumen-depleted component includes mainly water and mineral solids with some residual bitumen and solvent. The bitumen-depleted component may be mixed with liquefied petroleum gas, e.g., propane and/or butane, to further separate the residual solvent and bitumen. The disclosed system can include separators configured to separate the various components at the various stages in the process.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - C10G 1/04 (2009.01) USPC - 208/390; 208/415 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) - C10G 1/04 (2009.01) USPC - 208/390; 208/415 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched US 2008/0210602 A1 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) PubWEST (PGPB; USPT; EPAB; JPAB); Google; Google Scholar Search Terms: tar sands, bitumen, bitumen-enriched, bitumen-depleted, LPG, liquefied petroleum gas, propane, butane, hydrocarbon solvent, filter, tailings, aromatic, paraffin, aliphatic, toluene, xylene, biodiesel, naphtha, pressure, vacuum, bituminous sands, oil sands		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X - Y	US 2006/0076274 A1 (DUYVESTYEN, et al.) 13 April 2006 (13.04.2006) para [0010]-[0012], [0023], [0025], [0027], [0031]-[0032], [0038], [0043]-[0045], [0047]-[0049]; claim 5	1-14, 16-22 ----- 15, 23-26
Y	US 5,143,598 A (GRAHAM, et al.) 01 September 1992 (01.09.1992) col 1, ln 11-12; col 6, ln 52-58; col 7, ln 54-57; col 8, ln 25, 42-43; col 15, ln 30-33	15, 23-26
A	US 4,057,486 A (MEADUS, et al.) 08 November 1977 (08.11.1977)	1-26
A	US 2007/0209971 A1 (DUYVESTYEN, et al.) 13 September 2007 (13.09.2007)	6
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