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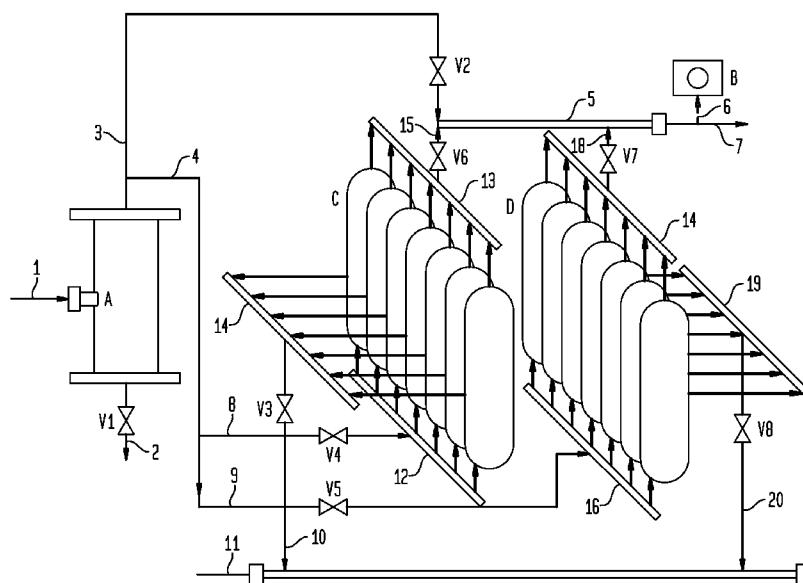
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(54) Title: METHODS FOR REMOVING CONTAMINANTS FROM NATURAL GAS

FIG. 1



(57) Abstract: A method for removing contaminants from a natural gas feed stream from a well head is provided for. The natural gas feed stream is fed to a separation unit which contains a first gas membrane unit for removing hydrocarbons and a second gas membrane unit for removing carbon dioxide from the natural gas feed stream. The method allows the same unit to be used for either hydrocarbon conditioning of field gas for drilling operations (power generation) and/or for pipeline quality natural gas production from wells.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2015/019421

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - B01D 53/22 (2015.01)

CPC - B01D 53/226 (2015.04)

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) - B01D 53/22, 53/30 (2015.01)

CPC- B01D 53/226, 53/228, 53/30 (2015.04) (keyword delimited)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC - 95/8, 45, 50, 51, 54 (keyword delimited)

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

Orbit, Google Scholar

Search terms used: natural gas, membrane, first, second, coalescing, coalescer, polyether, ketone, gas header, waste drum, frac, fracking, hydraulic fracturing

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 7,429,287 B2 (FRANTZ) 30 September 2008 (30.09.2008) entire document	1-4, 7, 8, 12, 20
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Y		5, 6, 9-11, 13-19
Y	US 6,128,919 A (DAUS et al) 10 October 2000 (10.10.2000) entire document	5, 6, 11, 17, 18
Y	US 5,067,971 A (BIKSON et al) 26 November 1991 (26.11.1991) entire document	9
Y	US 2013/0041049 A1 (COMPACTGTL PLC) 14 February 2013 (14.02.2013) entire document	10, 14, 16-18
Y	WO 2012/050816 A2 (UOP LLC) 19 April 2012 (19.04.2012) entire document	13-15
Y	US 7,537,641 B2 (LOKHANDWALA et al) 26 May 2009 (26.05.2009) entire document	15, 19
A	US 2012/0085232 A1 (SETHNA et al) 12 April 2012 (12.04.2012) entire document	1-20
A	US 8,419,828 B2 (DIAZ et al) 16 April 2013 (16.04.2013) entire document	1-20

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Further documents are listed in the continuation of Box C.

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"A" document defining the general state of the art which is not considered to be of particular relevance

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