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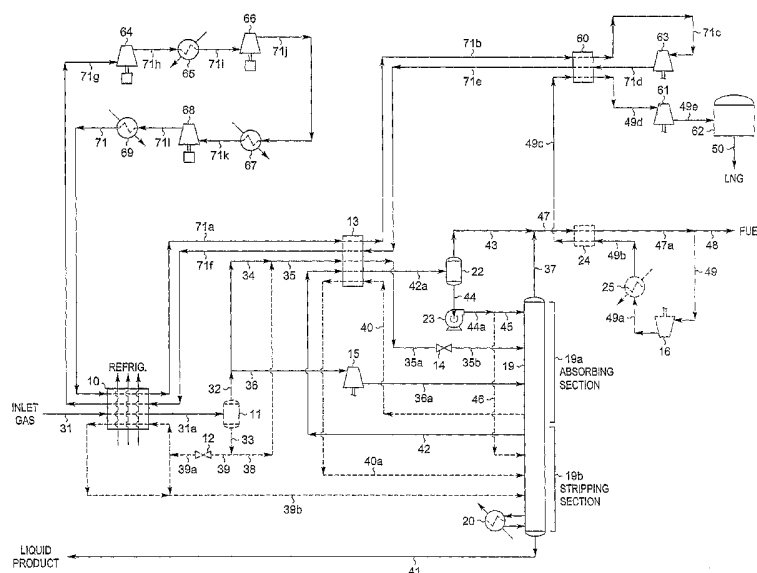
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(54) Title: NATURAL GAS LIQUEFACTION



(57) Abstract: A process for liquefying natural gas in conjunction with producing a liquid stream containing predominantly hydrocarbons heavier than methane is disclosed. In the process, the natural gas stream to be liquefied is partially cooled and divided into first and second streams. The first stream is further cooled to condense substantially all of it, expanded to an intermediate pressure, and then supplied to a distillation column at a first mid-column feed position. The second stream is also expanded to intermediate pressure and is then supplied to the column at a second lower mid-column feed position. A distillation stream is withdrawn from the column below the feed point of the second stream and is cooled to condense at least a part of it, forming a reflux stream. At least a portion of the reflux stream is directed to the distillation column as its top feed.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/14814

A. CLASSIFICATION OF SUBJECT MATTER

IPC: **F25J 1/00**(2006.01),3/00(2006.01)

USPC: 62/612,613,620

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. : 62/612,613,620

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.
X	US 2003/0005722 A1 (WILKINSON et al) 09 January 2003 (09.01.2003), see entire document.	1
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Y		2-5,9,13,17,21,29-33,57
Y	US 6,182,469 B1 (CAMPBELL et al) 06 February 2001 (06.02.2001), see entire document.	2-5,9,13,17,21,29-33,57
A	US 5,799,507 A (WILKINSON et al) 01 September 1998 (01.09.1998), see figures 4-6.	1-65
A	US 5,275,005 A (CAMPBELL et al) 04 January 1994 (04.01.1994), see entire document.	1-65

☐ 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 application or patent 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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"P"	document published prior to the international filing date but later than the priority date claimed		

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