



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
08.08.2012 Bulletin 2012/32

(51) Int Cl.:
F25J 1/02 (2006.01)

(43) Date of publication A2:
23.06.2010 Bulletin 2010/25

(21) Application number: **09178825.7**

(22) Date of filing: **11.12.2009**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR
 Designated Extension States:
AL BA RS

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(30) Priority: **12.12.2008 US 333500**

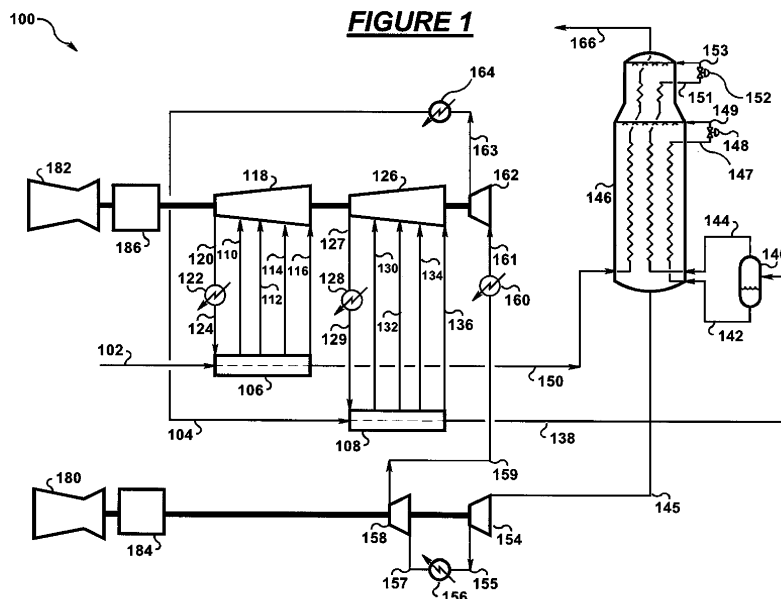
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(54) **Alternative pre-cooling arrangement**

(57) A natural gas liquefaction system, the system comprising a first precooling refrigeration system (106) that accepts at least a natural gas feed stream (102), a second precooling refrigeration system (108) that accepts at least a first refrigerant stream (104); and a cryogenic heat exchanger (146) fluidly connected to the first precooling refrigeration system and the second precool-

ing refrigeration system that accepts the natural gas feed stream (150) from the first precooling refrigeration system and the first refrigerant stream (138) from the second precooling refrigeration system to liquefy the natural gas feed stream (166), where the second precooling refrigeration system accepts only stream(s) having a composition different from the stream(s) accepted by the first precooling refrigeration system.





EUROPEAN SEARCH REPORT

Application Number
EP 09 17 8825

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	EP 1 471 319 A1 (TOTALFINAELF S A [FR]) 27 October 2004 (2004-10-27)	1-4,10, 11,13-15	INV. F25J1/02
Y	* paragraph [0038]; figures 1,3,4 * -----	5-9,12	
Y	ROBERTS M J ET AL: "REDUCING LNG CAPITAL COST IN TODAY'S COMPETITIVE ENVIRONMENT", INTERNATIONAL CONFERENCE ON LNG, , vol. 14TH 1 March 2006 (2006-03-01), pages PS2-6/1, XP009108055, Retrieved from the Internet: URL:http://www.airproducts.com/NR/rdonlyres/A53BE221-250E-40B4-86DD-F58F69B33520/0/ReducingLNGCapitalCosts.pdf * page 4, lines 14-15; figures 2,4-6 * -----	5-9,12	
A	SPILSBURY C ET AL: "Optimising the LNG liquefaction process", LNG JOURNAL, NELTON PUBLICATIONS, GRAVESEND, GB, vol. Jan/Feb, 1 January 2005 (2005-01-01), pages 40-43, XP009098734, ISSN: 1365-4314 * figure 2 * -----	1-5, 9-11, 13-15	TECHNICAL FIELDS SEARCHED (IPC) F25J
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 27 June 2012	Examiner Schopfer, Georg
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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EPO FORM 1503 03.02 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 09 17 8825

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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27-06-2012

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EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82