

Title (en)
LIQUEFACTION OF NATURAL GAS

Title (de)
VERFLÜSSIGUNG VON ERDGAS

Title (fr)
LIQUÉFACTION DE GAZ NATUREL

Publication
EP 2920532 A1 20150923 (EN)

Application
EP 13855718 A 20131101

Priority
• US 201261727577 P 20121116
• US 2013067919 W 20131101

Abstract (en)
[origin: WO2014078092A1] Systems and a method for the formation of a liquefied natural gas (LNG) are disclosed herein. The system includes a first fluorocarbon refrigeration system configured to chill a natural gas using a first fluorocarbon refrigerant and a second fluorocarbon refrigeration system configured to further chill the natural gas using a second fluorocarbon refrigerant. The system also includes a nitrogen refrigeration system configured to cool the natural gas using a nitrogen refrigerant to produce LNG and a nitrogen rejection unit configured to remove nitrogen from the LNG. As an alternative embodiment, the nitrogen refrigeration system can be replaced by a methane autorefrigeration system.

IPC 8 full level
F25J 1/00 (2006.01)

CPC (source: EP US)
F25J 1/0022 (2013.01 - EP US); **F25J 1/0035** (2013.01 - EP US); **F25J 1/004** (2013.01 - EP US); **F25J 1/0045** (2013.01 - EP US);
F25J 1/005 (2013.01 - EP US); **F25J 1/0052** (2013.01 - EP US); **F25J 1/0072** (2013.01 - EP US); **F25J 1/0097** (2013.01 - EP US);
F25J 1/0207 (2013.01 - EP US); **F25J 1/021** (2013.01 - EP US); **F25J 1/0218** (2013.01 - EP US); **F25J 1/0219** (2013.01 - EP US);
F25J 1/0264 (2013.01 - EP US); **F25J 1/0265** (2013.01 - EP US); **F25J 2210/04** (2013.01 - EP US); **F25J 2210/06** (2013.01 - EP US);
F25J 2220/62 (2013.01 - EP US); **F25J 2220/64** (2013.01 - EP US); **F25J 2245/02** (2013.01 - EP US); **F25J 2270/16** (2013.01 - EP US)

Designated contracting state (EPC)
AL 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 RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
WO 2014078092 A1 20140522; AU 2013345176 A1 20150604; AU 2013345176 B2 20161222; BR 112015009964 A2 20170711;
CA 2890089 A1 20140522; CA 2890089 C 20190430; CL 2015001052 A1 20151120; CN 104813127 A 20150729; CN 104813127 B 20170531;
EP 2920532 A1 20150923; EP 2920532 A4 20160914; IN 3309DEN2015 A 20151009; JP 2016505793 A 20160225; JP 6338589 B2 20180606;
MX 2015005359 A 20150714; SG 11201503053S A 20150629; US 2015285553 A1 20151008; US 2018172344 A1 20180621;
ZA 201503424 B 20170927

DOCDB simple family (application)
US 2013067919 W 20131101; AU 2013345176 A 20131101; BR 112015009964 A 20131101; CA 2890089 A 20131101;
CL 2015001052 A 20150423; CN 201380059674 A 20131101; EP 13855718 A 20131101; IN 3309DEN2015 A 20150420;
JP 2015543082 A 20131101; MX 2015005359 A 20131101; SG 11201503053S A 20131101; US 201314437168 A 20131101;
US 201815888668 A 20180205; ZA 201503424 A 20150515