

Title (en)
METHOD AND APPARATUS FOR LIQUEFYING A HYDROCARBON STREAM

Title (de)
VERFAHREN UND VORRICHTUNG ZUR VERFLÜSSIGUNG EINES KOHLENWASSERSTOFFSTROMS

Title (fr)
PROCÉDÉ ET DISPOSITIF POUR LIQUÉFIER UN COURANT D'HYDROCARBURES

Publication
EP 2044376 A2 20090408 (EN)

Application
EP 07787727 A 20070719

Priority
• EP 2007057469 W 20070719
• EP 06117663 A 20060721
• EP 07787727 A 20070719

Abstract (en)
[origin: WO2008009721A2] Method of liquefying a hydrocarbon stream such as natural gas from a feed stream (10), the method at least comprising the steps of: (a) circulating a first refrigerant stream (70) in a first refrigerant circuit (110); (b) cooling the first refrigerant stream (70) in one or more heat exchangers (14) of a first cooling stage (100) to provide a cooled first refrigerant stream (20); (c) passing at least part of the cooled first refrigerant stream (20) through one or more expanders to provide one or more expanded cooled first refrigerant streams (30); (d) passing the or at least one of the expanded cooled first refrigerant streams (30) and the feed stream (10) through the first one or more heat exchangers (14) to provide a cooled hydrocarbon stream (40); (e) passing the cooled hydrocarbon stream (40) through a second cooling stage (200) against a second refrigerant stream (50) to provide a liquefied hydrocarbon stream (60); wherein at least one expander is an expansion turbine (12) whose work energy created in step (c) is used in the first refrigerant circuit (110).

IPC 8 full level
F25J 1/02 (2006.01); **F25B 11/00** (2006.01)

CPC (source: EP US)
F25J 1/0042 (2013.01 - EP US); **F25J 1/0052** (2013.01 - EP US); **F25J 1/0055** (2013.01 - EP US); **F25J 1/0057** (2013.01 - EP US); **F25J 1/0214** (2013.01 - EP US); **F25J 1/0217** (2013.01 - EP US); **F25J 1/0281** (2013.01 - EP US); **F25J 1/0283** (2013.01 - EP US); **F25J 1/0288** (2013.01 - EP US); **F25J 1/0291** (2013.01 - EP US); **F25J 1/0292** (2013.01 - EP US); **F25J 2220/62** (2013.01 - EP US)

Citation (search report)
See references of WO 2008009721A2

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
WO 2008009721 A2 20080124; **WO 2008009721 A3 20081127**; AU 2007275118 A1 20080124; AU 2007275118 B2 20100812; EP 2044376 A2 20090408; JP 2009544923 A 20091217; RU 2009106092 A 20100827; RU 2434190 C2 20111120; US 2010011808 A1 20100121

DOCDB simple family (application)
EP 2007057469 W 20070719; AU 2007275118 A 20070719; EP 07787727 A 20070719; JP 2009519985 A 20070719; RU 2009106092 A 20070719; US 37433807 A 20070719