

Title (en)

SYSTEM AND METHOD TO PRODUCE LIQUEFIED NATURAL GAS

Title (de)

SYSTEM UND VERFAHREN ZUR HERSTELLUNG VON FLÜSSIGERDGAS

Title (fr)

SYSTÈME ET PROCÉDÉ DE PRODUCTION DE GAZ NATUREL LIQUÉFIÉ

Publication

EP 4416440 A1 20240821 (EN)

Application

EP 22721182 A 20220412

Priority

- US 202163255116 P 20211013
- US 2022024324 W 20220412

Abstract (en)

[origin: US2023114229A1] A small to mid-scale liquefied natural gas production system and method is provided. The disclosed liquefied natural gas production system employs a nitrogen-based refrigerant, at least one heat exchanger, three turbine/expanders and two or more refrigerant compression stages. The expansion ratio of one turbine/expander is appreciably lower than the expansion ratio of the other turbine/expanders such that the temperature of the exhaust stream from the turbine/expander with the lower expansion ratio is above the critical point temperature of the compressed natural gas containing feed stream but colder than -15° C.

IPC 8 full level

F25J 1/00 (2006.01)

CPC (source: EP US)

F25J 1/0022 (2013.01 - EP US); **F25J 1/005** (2013.01 - EP US); **F25J 1/0057** (2013.01 - US); **F25J 1/0072** (2013.01 - EP US);
F25J 1/0204 (2013.01 - EP); **F25J 1/0205** (2013.01 - US); **F25J 1/0207** (2013.01 - US); **F25J 1/023** (2013.01 - EP); **F25J 1/0265** (2013.01 - EP);
F25J 1/0281 (2013.01 - US); **F25J 1/0288** (2013.01 - EP); **F25J 1/0294** (2013.01 - EP); **F25J 2220/62** (2013.01 - EP);
F25J 2230/20 (2013.01 - EP); **F25J 2230/22** (2013.01 - US); **F25J 2230/24** (2013.01 - US); **F25J 2230/42** (2013.01 - US);
F25J 2240/04 (2013.01 - US); **F25J 2240/12** (2013.01 - 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

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

US 2023114229 A1 20230413; CA 3234465 A1 20230420; CN 118076848 A 20240524; EP 4416440 A1 20240821;
WO 2023063991 A1 20230420

DOCDB simple family (application)

US 202217717182 A 20220411; CA 3234465 A 20220412; CN 202280067712 A 20220412; EP 22721182 A 20220412;
US 2022024324 W 20220412