

Title (en)

METHOD AND HEAT EXCHANGER FOR RECOVERING COLD DURING THE RE-GASIFICATION OF CRYOGENIC LIQUIDS

Title (de)

VERFAHREN UND WÄRMEAUSTAUSCHER ZUR RÜCKGEWINNUNG VON KÄLTE BEI DER REGASIFIZIERUNG TIEFKALTER FLÜSSIGKEITEN

Title (fr)

PROCÉDÉ ET ÉCHANGEUR DE CHALEUR POUR LA RÉCUPÉRATION DE FROID LORS DE LA REGAZÉIFICATION DE LIQUIDES CRYOGÉNIQUES

Publication

EP 3397912 A1 20181107 (DE)

Application

EP 16742154 A 20160617

Priority

- DE 102015016889 A 20151228
- DE 102016006121 A 20160518
- DE 2016000253 W 20160617

Abstract (en)

[origin: WO2017114518A1] The invention relates to the recovery of cold during the re-gasification of cryogenic liquids, in particular, liquefied natural gas, liquefied nitrogen and liquefied oxygen. The cold is initially transferred from the cryogenic liquid to an intermediate medium and then from same to a liquid coolant, which remains without a phase change down to a temperature level of -60 °C and can be safely pumped in this way. The heat transfer occurs by evaporating and condensing the intermediate medium without use of pumps in natural circulation. The temperature of the intermediate medium can be set in the range of -20 °C to -100 °C by defining the equipment or construction features of the heat exchanger. The heat exchanger is characterised by relatively simple construction features and easy operability, which enable a suitably low capital expenditure for the cooling capacity.

IPC 8 full level

F28D 7/00 (2006.01); **F17C 7/04** (2006.01); **F17C 9/04** (2006.01); **F28D 7/02** (2006.01); **F28D 21/00** (2006.01)

CPC (source: EP)

F28D 7/0066 (2013.01); **F28D 7/022** (2013.01); **F28D 2021/0066** (2013.01)

Citation (search report)

See references of WO 2017114518A1

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)

DE 102016006121 A1 20170629; DE 112016006090 A5 20190110; EP 3397912 A1 20181107; EP 3397912 B1 20191113; TW 201730475 A 20170901; WO 2017114518 A1 20170706

DOCDB simple family (application)

DE 102016006121 A 20160518; DE 112016006090 T 20160617; DE 2016000253 W 20160617; EP 16742154 A 20160617; TW 105142936 A 20161223