

Title (en)

DEVICE FOR LIQUEFYING GASEOUS DIHYDROGEN FOR OFFSHORE OR ONSHORE STRUCTURE

Title (de)

VORRICHTUNG ZUR VERFLÜSSIGUNG VON GASFÖRMIGEM DIHYDROGEN FÜR OFFSHORE- ODER ONSHORE-STRUKTUR

Title (fr)

DISPOSITIF DE LIQUÉFACTION DE DIHYDROGÈNE GAZEUX POUR OUVRAGE FLOTTANT OU TERRESTRE

Publication

EP 4327037 A1 20240228 (FR)

Application

EP 22722310 A 20220414

Priority

- FR 2104153 A 20210421
- FR 2022050701 W 20220414

Abstract (en)

[origin: WO2022223909A1] The present invention relates to a device (11) for liquefying gaseous dihydrogen resulting from the evaporation of dihydrogen in the liquid state (9) stored in at least one tank (3, 5). The liquefaction device (11) comprising at least one heat exchanger (13), at least one feed branch (21) configured to convey at least one portion of the gaseous dihydrogen from the tank (3, 5) to a gaseous dihydrogen consumer (7), a part of the feed branch passing through the heat exchanger inside of which is placed a catalyst (151) that is involved in the conversion of the parahydrogen to orthohydrogen, at least one cooling branch (23) comprising at least one compression member (25); a portion of the cooling branch (23) passing through the heat exchanger (13) exchanges heat with the first pass (15) in order to liquefy at least one portion of the dihydrogen circulating in the cooling branch and to heat the dihydrogen circulating in the feed branch (21).

IPC 8 full level

F25J 1/00 (2006.01); **F25J 1/02** (2006.01)

CPC (source: EP KR US)

F25J 1/001 (2013.01 - EP KR US); **F25J 1/004** (2013.01 - EP KR); **F25J 1/0202** (2013.01 - EP KR); **F25J 1/0228** (2013.01 - EP KR); **F25J 1/023** (2013.01 - EP KR US); **F25J 1/0277** (2013.01 - EP KR US); **F25J 2205/82** (2013.01 - EP KR US); **F25J 2210/90** (2013.01 - EP KR)

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)

WO 2022223909 A1 20221027; AU 2022262269 A1 20231102; CA 3214186 A1 20221027; CL 2023003101 A1 20240503; CN 117295921 A 20231226; EP 4327037 A1 20240228; FR 3122250 A1 20221028; FR 3122250 B1 20230526; JP 2024516170 A 20240412; KR 20230175223 A 20231229; US 2024200866 A1 20240620

DOCDB simple family (application)

FR 2022050701 W 20220414; AU 2022262269 A 20220414; CA 3214186 A 20220414; CL 2023003101 A 20231018; CN 202280030097 A 20220414; EP 22722310 A 20220414; FR 2104153 A 20210421; JP 2023564572 A 20220414; KR 20237037984 A 20220414; US 202218555975 A 20220414