

Title (en)  
APPARATUS AND METHOD FOR GENERATING A TEMPERATURE-CONTROLLED COLD GAS STREAM

Title (de)  
VORRICHTUNG UND VERFAHREN ZUR ERZEUGUNG EINES TEMPERIERTEN, KALTEN GASSTROMS

Title (fr)  
APPAREIL ET PROCÉDÉ PERMETTANT DE GÉNÉRER UN FLUX DE GAZ FROID À TEMPÉRATURE CONTRÔLÉE

Publication  
**EP 4107422 A1 20221228 (DE)**

Application  
**EP 21705150 A 20210210**

Priority  
• DE 102020001082 A 20200220  
• EP 2021053253 W 20210210

Abstract (en)  
[origin: WO2021165123A1] An apparatus for generating a temperature-controlled cold gas stream, having a storage tank and an extraction line which is connected to the storage tank and which serves for the extraction of liquefied gas from the storage tank, and having an evaporator unit which is integrated in the extraction line and which is equipped with a heat exchanger surface for the indirect thermal contact of the liquefied gas with a heat carrier fluid, is characterized according to the invention in that a liquid line branches off from the extraction line downstream of the storage tank and upstream of the evaporator unit, which liquid line opens into the extraction line downstream of the evaporator unit at an introduction device, wherein the introduction device is equipped with a sensor for detecting the temperature in the extraction line and with a control valve which is operatively connected to the sensor and which serves for controlling the introduction of liquefied gas into the extraction line.

IPC 8 full level  
**F17C 9/02** (2006.01); **F17D 3/12** (2006.01)

CPC (source: EP)  
**F17C 9/02** (2013.01); **F17D 3/12** (2013.01); **F17C 2201/0109** (2013.01); **F17C 2201/032** (2013.01); **F17C 2201/054** (2013.01); **F17C 2201/056** (2013.01); **F17C 2203/03** (2013.01); **F17C 2221/011** (2013.01); **F17C 2221/013** (2013.01); **F17C 2221/014** (2013.01); **F17C 2221/016** (2013.01); **F17C 2223/0161** (2013.01); **F17C 2225/0123** (2013.01); **F17C 2227/0311** (2013.01); **F17C 2227/0316** (2013.01); **F17C 2227/0323** (2013.01); **F17C 2227/0339** (2013.01); **F17C 2250/0439** (2013.01); **F17C 2250/0631** (2013.01); **F17C 2265/022** (2013.01)

Citation (search report)  
See references of WO 2021165123A1

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)  
**DE 102020001082 A1 20210826**; CN 115135920 A 20220930; EP 4107422 A1 20221228; WO 2021165123 A1 20210826

DOCDB simple family (application)  
**DE 102020001082 A 20200220**; CN 202180015503 A 20210210; EP 2021053253 W 20210210; EP 21705150 A 20210210