

Title (en)

HEAT STATION FOR COOLING A CIRCULATING CRYOGEN

Title (de)

WÄRMESTATION ZUR KÜHLUNG EINES ZIRKULIERENDEN KRYOGENS

Title (fr)

STATION THERMIQUE POUR LE REFROIDISSEMENT D'UN CRYOGÈNE EN CIRCULATION

Publication

EP 3775717 A4 20220126 (EN)

Application

EP 18913476 A 20180406

Priority

US 2018026482 W 20180406

Abstract (en)

[origin: WO2019194819A2] A heat station for a GM or Stirling cycle expander provides a versatile, efficient, and cost effective means of transferring heat from a remote load at cryogenic temperatures that is cooled by a circulating cryogen to the gas in a GM or Stirling cycle expander as it flows between a regenerator and a displaced volume. The heat exchanger comprises a shell that has external and internal fins thermally connected to it that are aligned parallel to the axis of the shell and enclosed in a housing having an inlet port and an outlet port on the bottom of the housing.

IPC 8 full level

F25B 9/14 (2006.01); **F25B 9/06** (2006.01)

CPC (source: EP KR)

F25B 9/06 (2013.01 - KR); **F25B 9/14** (2013.01 - EP KR); **F25B 2309/001** (2013.01 - EP)

Citation (search report)

- [X] US 2016097567 A1 20160407 - HIRATSUKA YOSHIKATSU [JP]
- [A] JP 2003166768 A 20030613 - SHARP KK
- [A] CN 1760604 A 20060419 - SHANGHAI TECH PHYSICS INST [CN]
- [A] US 2018023849 A1 20180125 - LONGSWORTH RALPH C [US]
- See references of WO 2019194819A2

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

DOCDB simple family (publication)

WO 2019194819 A2 20191010; WO 2019194819 A3 20191219; CN 111936802 A 20201113; CN 111936802 B 20221014; EP 3775717 A2 20210217; EP 3775717 A4 20220126; JP 2021519407 A 20210810; JP 7022221 B2 20220217; KR 102398432 B1 20220513; KR 20200128758 A 20201116

DOCDB simple family (application)

US 2018026482 W 20180406; CN 201880092077 A 20180406; EP 18913476 A 20180406; JP 2020552189 A 20180406; KR 20207031905 A 20180406