

Title (en)  
HEAT MEDIUM CIRCULATION SYSTEM

Title (de)  
SYSTEM FÜR HITZEMEDIUMZIRKULATION

Title (fr)  
SYSTÈME DE CIRCULATION DE FLUIDE THERMIQUE

Publication  
**EP 4075078 A1 20221019 (EN)**

Application  
**EP 21192497 A 20210823**

Priority  
JP 2021066873 A 20210412

Abstract (en)

[Object] The present disclosure provides a heat medium circulation system which safely disperses leaked refrigerant to outside atmosphere and which further enhances safety.[Solving Means] A heat medium circulation system 100 in the present disclosure includes: a refrigerant circuit 110 which is formed by annularly connecting a compressor 111, a use-side heat exchanger 112, an expander 113 and a heat source-side heat exchanger 114 to one another; a heat medium circuit 120 through which heat medium cooled or heated by the use-side heat exchanger 112 by means of refrigerant discharged from the compressor 111 circulates; and a control device 130, in which the heat medium circuit 120 is provided therein at least with a circulation device through which the heat medium circulates, a heating device 127 for electrically heating the heat medium, and a deaerating device 128 which discharges the circulating gas in the heat medium circuit 120 to outside the heat medium circuit 120. The heat medium circulation system 100 uses flammable refrigerant. The heating device 127 is placed downstream of the circulation device and on a side higher than the circulation device, and the deaerating device 128 is placed downstream of the heating device 127 and on a side higher than the heating device 127.

IPC 8 full level  
**F24H 1/00** (2022.01); **F24H 4/02** (2022.01); **F25B 13/00** (2006.01)

CPC (source: EP)  
**F24D 3/18** (2013.01); **F24D 17/02** (2013.01); **F24D 19/1072** (2013.01); **F24F 5/0096** (2013.01); **F24F 11/36** (2017.12); **F24F 11/89** (2017.12);  
**F24H 15/12** (2022.01); **F25B 13/00** (2013.01); **F24D 2200/08** (2013.01); **F24D 2200/123** (2013.01); **F24F 2221/183** (2013.01);  
**F24F 2221/54** (2013.01); **F25B 2313/003** (2013.01); **F25B 2400/01** (2013.01); **F25B 2400/12** (2013.01); **F25B 2500/06** (2013.01);  
**F25B 2500/222** (2013.01)

Citation (applicant)  
WO 2018047265 A1 20180315 - MITSUBISHI ELECTRIC CORP [JP]

Citation (search report)  
• [I] WO 2018167861 A1 20180920 - MITSUBISHI ELECTRIC CORP [JP]  
• [A] WO 2019239556 A1 20191219 - MITSUBISHI ELECTRIC CORP [JP]  
• [A] JP 2020204411 A 20201224 - PANASONIC IP MAN CORP

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)  
**EP 4075078 A1 20221019**; JP 2022162184 A 20221024

DOCDB simple family (application)  
**EP 21192497 A 20210823**; JP 2021066873 A 20210412