Title (en)

REFRIGERATION CYCLE DEVICE

Title (de)

KÄLTEKREISLAUFVORRICHTUNG

Title (fr)

DISPOSITIF À CYCLE DE RÉFRIGÉRATION

Publication

EP 4317849 A1 20240207 (EN)

Application

EP 22781007 A 20220329

Priority

- JP 2021062241 A 20210331
- JP 2022015713 W 20220329

Abstract (en)

Providing a refrigeration cycle apparatus capable of using a refrigerant of an appropriate composition in accordance with an operating condition. The refrigeration cycle apparatus (100) includes a main refrigerant circuit (50), a changing unit (70), and a controller (110). The main refrigerant circuit uses a non-azeotropic refrigerant mixture containing a first refrigerant and a second refrigerant. The changing unit changes a composition ratio between the first refrigerant and the second refrigerant in a refrigerant flowing through the main refrigerant circuit. The controller controls an operation of the changing unit. The controller executes a first mode and a second mode. The first mode is a mode in which the operation of the changing unit is controlled to cause substantially the second refrigerant alone to flow through the main refrigerant circuit. The second mode is a mode in which the operation of the changing unit is controlled to cause a refrigerant mixture of the first refrigerant and the second refrigerant to flow through the main refrigerant circuit.

IPC 8 full level

F25B 13/00 (2006.01); **F25B 1/00** (2006.01); **F25B 49/02** (2006.01)

CPC (source: EP US)

F25B 9/006 (2013.01 - US); **F25B 13/00** (2013.01 - EP); **F25B 49/00** (2013.01 - US); **F25B 49/02** (2013.01 - EP); F25B 2600/0253 (2013.01 - EP); F25B 2600/2513 (2013.01 - EP); F25B 2600/2523 (2013.01 - EP); F25B 2700/00 (2013.01 - US); F25B 2700/19 (2013.01 - EP); F25B 2700/2108 (2013.01 - EP)

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)

EP 4317849 A1 20240207; **EP 4317849 A4 20240417**; CN 117098959 A 20231121; JP 2022157804 A 20221014; JP 2023038281 A 20230316; JP 7216308 B2 20230201; US 2024019178 A1 20240118; WO 2022210796 A1 20221006

DOCDB simple family (application)

EP 22781007 A 20220329; CN 202280026142 A 20220329; JP 2021062241 A 20210331; JP 2022015713 W 20220329; JP 2023005586 A 20230118; US 202318374327 A 20230928