

Title (en)
REFRIGERATION CYCLE DEVICE

Title (de)
KÄLTEKREISLAUFVORRICHTUNG

Title (fr)
DISPOSITIF À CYCLE DE RÉFRIGÉRATION

Publication
EP 4180742 A4 20230809 (EN)

Application
EP 20944786 A 20200707

Priority
JP 2020026569 W 20200707

Abstract (en)
[origin: EP4180742A1] A refrigeration cycle apparatus includes a compressor (10), a first heat exchanger (20), a decompressing device (30), a second heat exchanger (40), a first switching valve (60), a second switching valve (70), and a controller. The first switching valve is switched to one of a first state and a second state. In the first state, a discharge port of the compressor is connected to the first heat exchanger. In the second state, the discharge port of the compressor is connected to the second heat exchanger. The second switching valve is switched to one of a third state, a fourth state, and a fifth state. In the third state, a suction port of the compressor is connected to the second heat exchanger. In the fourth state, the suction port of the compressor is connected to the first heat exchanger. In the fifth state, the suction port of the compressor is connected to the decompressing device. When switching to a second cooling operation to bring the first and second switching valves into the second and fourth states, respectively, is requested during a first cooling operation to bring the first and second switching valves into the first and third states, respectively, the controller performs a first switching operation to bring the first switching valve into the second state and bring the second switching valve into the fifth state, and thereafter switches the first switching operation to the second cooling operation.

IPC 8 full level
F25B 13/00 (2006.01); **F25B 1/00** (2006.01); **F25B 41/26** (2021.01)

CPC (source: EP US)
F25B 13/00 (2013.01 - EP US); **F25B 41/20** (2021.01 - US); **F25B 41/26** (2021.01 - EP); **F25B 2313/02742** (2013.01 - EP); **F25B 2600/25** (2013.01 - US)

Citation (search report)

- [A] JP H04254158 A 19920909 - DAIKIN IND LTD
- [A] US 2007051123 A1 20070308 - MATSUI NOBUKI [JP], et al
- [A] US 2019331375 A1 20191031 - TANAKA KOSUKE [JP], et al
- [A] US 2020116374 A1 20200416 - TASHIRO YUSUKE [JP], et al
- See also references of WO 2022009312A1

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 4180742 A1 20230517; **EP 4180742 A4 20230809**; AU 2020457289 A1 20221222; AU 2020457289 B2 20231123; CN 115803571 A 20230314; JP 7357793 B2 20231006; JP WO2022009312 A1 20220113; US 2023175744 A1 20230608; WO 2022009312 A1 20220113

DOCDB simple family (application)
EP 20944786 A 20200707; AU 2020457289 A 20200707; CN 202080102589 A 20200707; JP 2020026569 W 20200707; JP 2022534537 A 20200707; US 202017922545 A 20200707