

Title (en)
REFRIGERATION CYCLE DEVICE

Title (de)
KÄLTEKREISLAUFVORRICHTUNG

Title (fr)
DISPOSITIF À CYCLE DE RÉFRIGÉRATION

Publication
EP 4261475 A4 20231227 (EN)

Application
EP 20965118 A 20201210

Priority
JP 2020046094 W 20201210

Abstract (en)
[origin: EP4261475A1] An injection circuit (60) includes a gas-liquid separator (7) to separate some of refrigerant into gas and liquid, a first pipe (8) through which liquid refrigerant is discharged from the gas-liquid separator (7), a second pipe (9) through which gas refrigerant is discharged from the gas-liquid separator (7), a third pipe (10) in which refrigerant that flows through the first pipe (8) and refrigerant that flows through the second pipe (9) merge with each other to flow to an injection port (1p) of a compressor (1), a flow rate regulation valve (13) provided in the first pipe (8), and a solenoid valve (14) provided in the second pipe (9). A refrigeration cycle apparatus (100) includes a control device (70) to adjust an amount of refrigerant in a main circuit (50) by controlling an opening of the flow rate regulation valve (13) and an open and closed state of the solenoid valve (14).

IPC 8 full level
F25B 41/00 (2021.01); **F25B 41/39** (2021.01); **F25B 49/02** (2006.01)

CPC (source: EP)
F25B 31/008 (2013.01); **F25B 41/00** (2013.01); **F25B 41/39** (2021.01); **F25B 49/02** (2013.01); **F25B 2400/13** (2013.01); **F25B 2400/23** (2013.01); **F25B 2600/05** (2013.01); **F25B 2600/2509** (2013.01); **F25B 2600/2513** (2013.01); **F25B 2700/193** (2013.01); **F25B 2700/1931** (2013.01); **F25B 2700/21163** (2013.01)

Citation (search report)

- [XYI] JP 2016156557 A 20160901 - JOHNSON CONTROLS HITACHI AIR CONDITIONING TECH (HONGKONG) LTD
- [XY] US 2010115975 A1 20100513 - MITRA BISWAJIT [US], et al
- [XY] US 2011023514 A1 20110203 - MITRA BISWAJIT [US], et al
- [Y] US 2020363102 A1 20201119 - ZHA SHITONG [US]
- See references of WO 2022123736A1

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 4261475 A1 20231018; EP 4261475 A4 20231227; JP 7433476 B2 20240219; JP WO2022123736 A1 20220616;
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DOCDB simple family (application)
EP 20965118 A 20201210; JP 2020046094 W 20201210; JP 2022567979 A 20201210