

Title (en)
REFRIGERATION CYCLE DEVICE

Title (de)
KÄLTEKREISLAUFVORRICHTUNG

Title (fr)
DISPOSITIF À CYCLE DE RÉFRIGÉRATION

Publication
EP 4166871 A4 20230809 (EN)

Application
EP 20940550 A 20200615

Priority
JP 2020023429 W 20200615

Abstract (en)
[origin: EP4166871A1] The refrigeration cycle apparatus (100) includes a refrigerant circuit (10) which includes a compressor (1), a condenser (2), a supercooler (4), an expansion valve (5), and an evaporator (6), and circulates refrigerant in the order of the compressor, the condenser, the supercooler, the expansion valve, and the evaporator. The supercooler includes a plurality of refrigerant flow paths through which the refrigerant flows. The plurality of refrigerant flow paths includes a plurality of first refrigerant flow paths (P1) disposed at the most upstream side of the refrigerant circuit among the plurality of refrigerant flow paths, and a plurality of second refrigerant flow paths (P2) through which the refrigerant that has flowed through each of the plurality of first refrigerant flow paths flows. The total flow path cross-sectional area of the plurality of first refrigerant flow paths is greater than the total flow path cross-sectional area of the plurality of second refrigerant flow paths.

IPC 8 full level
F25B 40/02 (2006.01)

CPC (source: EP)
F25B 39/04 (2013.01); **F25B 40/02** (2013.01); **F25B 7/00** (2013.01); **F25B 2400/13** (2013.01); **F25B 2400/16** (2013.01); **F25B 2500/01** (2013.01); **F28D 1/05325** (2013.01)

Citation (search report)

- [A] US 2015211772 A1 20150730 - SHIMAZU YUSUKE [JP]
- [A] EP 1531309 A2 20050518 - CALSONIC KANSEI UK LTD [GB]
- [A] JP 2003106708 A 20030409 - SHOWA DENKO KK
- See references of WO 2021255790A1

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 4166871 A1 20230419; EP 4166871 A4 20230809; CN 115698607 A 20230203; JP 7341340 B2 20230908; JP WO2021255790 A1 20211223; WO 2021255790 A1 20211223

DOCDB simple family (application)
EP 20940550 A 20200615; CN 202080101910 A 20200615; JP 2020023429 W 20200615; JP 2022531114 A 20200615