Title (en)

REFRIGERATION CYCLE DEVICE

Title (de)

KÄLTEKREISLAUFVORRICHTUNG

Title (fr)

DISPOSITIF À CYCLE DE RÉFRIGÉRATION

Publication

EP 3795928 A4 20210407 (EN)

Application

EP 18918977 A 20180515

Priority

JP 2018018766 W 20180515

Abstract (en)

[origin: WO2019220541A1] Provided is a refrigeration cycle device having improved seasonal performance compared to a conventional refrigeration cycle device. The refrigeration cycle device (100) is equipped with a refrigerant circuit that includes a compressor (1), a first heat exchanger (3), and a second heat exchanger (4), and in which a refrigerant circulates. The refrigeration circuit is provided so as to be capable of switching between a first state, in which the first heat exchanger (3) acts as a condenser and the second heat exchanger (4) acts as an evaporator, and a second state, in which the second heat exchanger (4) acts as a condenser and the first heat exchanger (3) acts as an evaporator. The first heat exchanger (3) includes a first heat transfer tube (6) in the interior of which a refrigerant flows. The first heat transfer tube (6) has a first tube section (61) located downstream from an intermediate position in the direction in which the refrigerant circulates when the first heat exchanger is acting as a condenser. The first heat exchanger (3) also includes a first content member (7) arranged in the interior of the first tube section (61). The inner diameter D1 and the equivalent value diameter M1 of the first tube section (61) satisfy the relational expression D1/2.5 < M1 < D1/1.5 in the first state and the second state.

IPC 8 full level

F25B 39/04 (2006.01); **F25B 13/00** (2006.01); **F25B 39/02** (2006.01); **F28F 1/40** (2006.01); **F28F 9/02** (2006.01); **F28F 13/08** (2006.01); **F28F 13/12** (2006.01)

CPC (source: EP)

F25B 13/00 (2013.01); **F25B 39/028** (2013.01); **F25B 39/04** (2013.01); **F28F 1/40** (2013.01); **F28F 9/0282** (2013.01); **F28F 13/08** (2013.01); **F28F 13/12** (2013.01)

Citation (search report)

- [IA] JP H11257800 A 19990924 - SANYO ELECTRIC CO
- [A] EP 2159514 A2 20100303 - JOHNSON CONTROLS TECH CO [US]
- [A] WO 2015125525 A1 20150827 - MITSUBISHI ELECTRIC CORP [JP]
- [A] US 2016223274 A1 20160804 - TOMINAGA SATOSHI [JP], et al
- See also references of WO 2019220541A1

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 3795928 A1 20210324; **EP 3795928 A4 20210407**; CN 112119271 A 20201222; JP WO2019220541 A1 20210311; WO 2019220541 A1 20191121

DOCDB simple family (application)

EP 18918977 A 20180515; CN 201880093146 A 20180515; JP 2018018766 W 20180515; JP 2020518856 A 20180515