

Title (en)
HEAT EXCHANGER AND REFRIGERATION CYCLE DEVICE

Title (de)
WÄRMETAUSCHER UND KÄLTEKREISLAUFVORRICHTUNG

Title (fr)
ÉCHANGEUR DE CHALEUR ET DISPOSITIF À CYCLE DE RÉFRIGÉRATION

Publication
EP 4235058 A4 20240110 (EN)

Application
EP 20958620 A 20201020

Priority
JP 2020039355 W 20201020

Abstract (en)
[origin: EP4235058A1] A heat exchanger (100) includes a first heat exchange portion (11) and a second heat exchange portion (12) that are arranged side by side in a Y direction intersecting with a direction of gravity. The first heat exchange portion includes a plurality of first fins (1) and a plurality of first flat tubes (2), the first flat tubes being arranged side by side in the direction of gravity. The second heat exchange portion includes a plurality of second fins (3) and a plurality of second flat tubes (4), the plurality of second flat tubes (4) being arranged side by side in the direction of gravity. The heat exchanger further includes: a first header (13) connected to a first end of each of the first flat tubes; a second header (14) connected to a first end of each of the second flat tubes; and a third header (15) connected to each of the first flat tubes and each of the second flat tubes. When viewed in a Y direction, each of the second flat tubes is disposed not to overlap with each of the first flat tubes. The third header includes: a first plate (15A) provided with a plurality of first insertion holes (16) through which the second ends of the first flat tubes are respectively inserted and a plurality of second insertion holes (17) through which the second ends of the second flat tubes are respectively inserted; and a second plate (15B) provided with a plurality of communication spaces (18) each communicating with a corresponding one of the first insertion holes and a corresponding one of the second insertion holes.

IPC 8 full level
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Citation (search report)

- [X] CN 108474632 A 20180831 - MITSUBISHI ELECTRIC CORP
- [X] EP 3578913 A1 20191211 - MITSUBISHI ELECTRIC CORP [JP]
- [X] EP 3051244 A1 20160803 - MITSUBISHI ELECTRIC CORP [JP]
- [X] WO 2019142617 A1 20190725 - DAIKIN IND LTD [JP]
- [A] EP 3088831 A1 20161102 - MITSUBISHI ELECTRIC CORP [JP]
- See references of WO 2022085067A1

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 4235058 A1 20230830; **EP 4235058 A4 20240110**; CN 116507871 A 20230728; JP WO2022085067 A1 20220428; US 2023375283 A1 20231123; WO 2022085067 A1 20220428

DOCDB simple family (application)
EP 20958620 A 20201020; CN 202080106198 A 20201020; JP 2020039355 W 20201020; JP 2022556850 A 20201020; US 202018027236 A 20201020