

Title (en)
Heat exchanger and air conditioner on which this heat exchanger is mounted

Title (de)
Wärmetauscher und Klimaanlage, auf der der Wärmetauscher montiert ist

Title (fr)
Échangeur thermique et climatiseur sur lequel est monté cet échangeur thermique

Publication
EP 2423609 A3 20161109 (EN)

Application
EP 11177616 A 20110816

Priority
JP 2010185948 A 20100823

Abstract (en)
[origin: EP2423609A2] A heat exchanger in which a breakage of a connection pipeline during installation or the like can be prevented is obtained. A heat exchanger (10) is provided with a heat transfer pipe which is formed of aluminum or aluminum alloy and a connection pipeline (20) through which a refrigerant flowing in from the heat transfer pipe or a refrigerant flowing into the heat transfer pipe passes and is disposed in an air conditioner, and the connection pipeline (20) has a gas pipeline (30) and a liquid pipeline (40). Also, each of the gas pipeline (30) and the liquid pipeline (40) is constituted by connecting an aluminum pipeline (31) or (41) formed of aluminum or aluminum alloy and a copper pipeline (32) or (42) formed of copper or copper alloy by a connection portion (37) or (47), respectively, and each of descending portions (33) and (43) is formed. Each of the connection portions (37) and (47) is arranged in straight portions (35) and (45) of the descending portions (33) and (43), respectively, and in the straight portions (35) and (45), the aluminum pipelines (31) and (41) are longer than the copper pipelines (32) and (42).

IPC 8 full level
F24F 1/0063 (2019.01); **F25B 47/00** (2006.01); **F28F 21/08** (2006.01)

CPC (source: EP US)
F24D 15/04 (2013.01 - EP); **F24F 1/0057** (2019.01 - EP); **F24F 1/0063** (2019.01 - EP US); **F24F 1/0067** (2019.01 - EP US); **F24F 1/0068** (2019.01 - EP); **F24F 1/26** (2013.01 - EP US); **F25B 41/40** (2021.01 - EP US); **F28D 1/0477** (2013.01 - EP); **F28D 1/0478** (2013.01 - EP); **F28F 21/084** (2013.01 - EP); **F28F 21/085** (2013.01 - EP)

Citation (search report)

- [XY] KR 20080095628 A 20081029 - LG ELECTRONICS INC [KR]
- [YA] JP H10122586 A 19980515 - FUJITSU GENERAL LTD
- [A] JP 2005055081 A 20050303 - MATSUSHITA ELECTRIC IND CO LTD
- [A] EP 2184549 A2 20100512 - MITSUBISHI ELECTRIC CORP [JP]
- [A] JP 2005090761 A 20050407 - MATSUSHITA ELECTRIC IND CO LTD
- [A] US 2008257533 A1 20081023 - ROTTMANN EDWARD G [US]
- [A] JP H05164349 A 19930629 - MITSUBISHI ELECTRIC CORP
- [AD] JP H06300303 A 19941028 - SANYO ELECTRIC CO
- [A] JP 3899173 B2 20070328
- [A] US 4186474 A 19800205 - HINE LOUIS P [US]
- [A] KR 20030043574 A 20030602 - JUNG KEUN HO [KR]

Cited by
CN105539803A; EP3101353A4; US11506425B2; US11549041B2; US11441802B2; US11549695B2; US11492527B2; US11493244B2; WO2017136172A1; WO2019174200A1; US11365335B2; US11820933B2; US11435118B2; US11906207B2; US11441819B2; US11535781B2

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 2423609 A2 20120229; **EP 2423609 A3 20161109**; **EP 2423609 B1 20200415**; CN 102374592 A 20120314; CN 102374592 B 20140507; JP 2012042169 A 20120301; JP 5388969 B2 20140115

DOCDB simple family (application)
EP 11177616 A 20110816; CN 201110241862 A 20110823; JP 2010185948 A 20100823