

Title (en)  
HEAT EXCHANGER, HEAT EXCHANGER STRUCTURE, AND FIN FOR HEAT EXCHANGER

Title (de)  
WÄRMETAUSCHER, WÄRMETAUSCHERSTRUKTUR UND RIPPE FÜR WÄRMETAUSCHER

Title (fr)  
ÉCHANGEUR DE CHALEUR, STRUCTURE D'ÉCHANGEUR DE CHALEUR, ET AILETTE DESTINÉE À UN ÉCHANGEUR DE CHALEUR

Publication  
**EP 3015808 A4 20160727 (EN)**

Application  
**EP 13888478 A 20130628**

Priority  
JP 2013004041 W 20130628

Abstract (en)  
[origin: EP3015808A1] Provided is a heat exchanger that can, even when frosting occurs on an upwind side of the heat exchanger, exchange heat continuously on a downwind side of a fin by securing a ventilation path, and in addition, further improve drainage of the melt water. The heat exchanger (10) of the present invention includes a plurality of tubes (21) each having a refrigerant flowpath (21a) through which a refrigerant flows and a corrugated fin (22) including a plurality of heat transfer walls (23) that are arranged in a running direction of the tubes (21) and span from one to the other of adjacent tubes among the plurality of tubes (21), the fin being capable of exchanging heat with the tubes (21). Each of the heat transfer walls (23) includes a heat transfer piece (23R(L)) leading to a leading edge portion (23a) positioned on the upwind side of a passing airflow (A) and a leading edge portion (23b) indented toward the downwind side in the direction of the airflow A relative to the leading edge portion (23a). A first heat transfer piece is disposed on every other layer of the arrangement on both of a side closer to one tube (21) and a side closer to the other tube (21) of adjacent tubes among the plurality of tubes such that first heat transfer piece appears alternately on both sides.

IPC 8 full level  
**F28F 3/04** (2006.01); **F25B 39/02** (2006.01); **F28F 1/12** (2006.01); **F28F 17/00** (2006.01)

CPC (source: EP)  
**F28F 1/126** (2013.01); **F28F 17/00** (2013.01); **F28F 17/005** (2013.01); **F28F 2215/00** (2013.01)

Citation (search report)

- [XYI] JP 2002130973 A 20020509 - ZEXEL VALEO CLIMATE CONTR CORP
- [X] JP S5918179 U 19840203
- [X] US 2012227945 A1 20120913 - TARAS MICHAEL F [US], et al
- [X] JP H06347185 A 19941220 - MATSUSHITA REFRIGERATION
- [Y] US 2009133860 A1 20090528 - HARADA MASAKI [JP], et al
- [Y] EP 1519133 A2 20050330 - SANDEN CORP [JP]
- See references of WO 2014207785A1

Cited by  
CN110462324A; US11262107B2; US11428446B2; US12163743B2; US11035623B2; US11181284B2; US11168928B2; US11415371B2; EP3604996A4

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 3015808 A1 20160504**; **EP 3015808 A4 20160727**; **EP 3015808 B1 20180829**; JP WO2014207785 A1 20170223; WO 2014207785 A1 20141231

DOCDB simple family (application)  
**EP 13888478 A 20130628**; JP 2013004041 W 20130628; JP 2015523665 A 20130628