

Title (en)  
PLATE-TYPE HEAT EXCHANGER AND REFRIGERATION CYCLE DEVICE WITH SAME

Title (de)  
PLATTENWÄRMETAUSCHER UND KÄLTEKREISLAUFVORRICHTUNG DAMIT

Title (fr)  
ÉCHANGEUR DE CHALEUR DU TYPE À PLAQUES ET DISPOSITIF DE CYCLE DE RÉFRIGÉRATION LE COMPORTANT

Publication  
**EP 2977704 B1 20200617 (EN)**

Application  
**EP 13878608 A 20130322**

Priority  
JP 2013058210 W 20130322

Abstract (en)  
[origin: EP2977704A1] The present invention provides a plate-type heat exchanger in which first flow passages A and second flow passages B are alternately formed between a plurality of heat transfer plates 1 provided at predetermined intervals, and the first flow passages A and the second flow passages B are each provided with an inner fin 2, wherein: each of the plurality of heat transfer plates 1 includes an upstream-side passage hole 20a serving as an inlet of a first fluid to the first flow passage A or as an inlet of a second fluid to the second flow passage B, and a downstream-side passage hole 20b serving as an outlet of the first fluid from the first flow passage A or as an outlet of the second fluid from the second flow passage B; a sheet-like flow straightening plate 30 is disposed in each of the first flow passages A and the second flow passages B so as to separate between the upstream-side passage hole 20a and the inner fin 2; and the flow straightening plate 30 has a plurality of opening parts 31 serving as a flow passage for the first fluid or the second fluid, and opening areas of the plurality of opening parts 31 are designed so that a flow passage resistance decreases from a side on which a distance to the upstream-side passage hole 20a is smaller toward a side on which the distance is larger in the flow straightening plate 30.

IPC 8 full level  
**F28F 3/06** (2006.01); **F28F 3/02** (2006.01)

CPC (source: EP)  
**F25B 39/022** (2013.01); **F28D 9/005** (2013.01); **F28F 3/025** (2013.01); **F28F 3/027** (2013.01); **F28F 3/06** (2013.01); **F28F 9/026** (2013.01); **F28F 9/0278** (2013.01); **F25B 2339/043** (2013.01); **F28D 2021/0068** (2013.01)

Cited by  
EP3653983A1

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

DOCDB simple family (publication)  
**EP 2977704 A1 20160127**; **EP 2977704 A4 20170201**; **EP 2977704 B1 20200617**; CN 203785330 U 20140820; HK 1216114 A1 20161014; JP 6091601 B2 20170308; JP WO2014147804 A1 20170216; WO 2014147804 A1 20140925

DOCDB simple family (application)  
**EP 13878608 A 20130322**; CN 201420068680 U 20140218; HK 16104130 A 20160412; JP 2013058210 W 20130322; JP 2015506497 A 20130322