

Title (en)  
PLATE-TYPE HEAT EXCHANGER AND HEAT PUMP DEVICE

Title (de)  
PLATTENWÄRMETAUSCHER UND WÄRMEPUMPENVORRICHTUNG

Title (fr)  
ECHANGEUR DE CHALEUR DU TYPE A PLAQUES ET DISPOSITIF DE POMPE A CHALEUR

Publication  
**EP 2503277 A4 20140813 (EN)**

Application  
**EP 10831513 A 20101112**

Priority  
• JP 2009263598 A 20091119  
• JP 2010070192 W 20101112

Abstract (en)  
[origin: EP2503277A1] A plate heat exchanger with reduced pressure loss of a fluid and enhanced heat transfer efficiency is provided by a simple configuration. An upper heat transfer plate 2 and a lower heat transfer plate 3 adjacent to each other are corrugated in a wave pattern waving in a stacking direction. Between these plates, when seen in the stacking direction, intersection points are formed at intersections of a plurality of virtual bottom edge lines 21 and a plurality of virtual top edge lines 22, the bottom edge lines representing bottoms of the wave pattern of the upper heat transfer plate 2 and extending in a direction different from a direction of a long side, and the top edge lines representing tops of the wave pattern of the lower heat transfer plate 3 and extending in a direction different from the direction of the long side. Each of the bottoms of the wave pattern represented by the bottom edge lines and each of the tops of the wave pattern represented by the top edge lines come into contact with each other at each of the intersection points, thereby forming a contact portion. Between the upper heat transfer plate 2 and the lower heat transfer plate 3, a joint point 11 corresponding to an intersection point 23 at an end closest to an outer periphery 2-3 along the long side among the intersection points existing on one of the bottom edge lines 21 is formed at a position that substantially coincides with the outer periphery along the long side.

IPC 8 full level  
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Citation (search report)  
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• [A] WO 2007004939 A1 20070111 - ALFA LAVAL CORP AB [SE], et al  
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• See references of WO 2011062118A1

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Designated contracting state (EPC)  
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DOCDB simple family (application)  
**EP 10831513 A 20101112**; CN 201080052178 A 20101112; HK 12112886 A 20121213; JP 2009263598 A 20091119; JP 2010070192 W 20101112; US 201013510633 A 20101112