

Title (en)  
PLATE TYPE HEAT EXCHANGER FOR THREE FLUIDS AND METHOD OF MANUFACTURING THE HEAT EXCHANGER

Title (de)  
PLATTENWÄRMETAUSCHER FÜR DREI FLUIDE UND VERFAHREN ZU DESSEN HERSTELLUNG

Title (fr)  
ECHANGEUR THERMIQUE DU TYPE A PLAQUES POUR TROIS FLUIDES ET PROCEDE DE FABRICATION

Publication  
**EP 1054225 A4 20050112 (EN)**

Application  
**EP 99959689 A 19991208**

Priority  
• JP 9906864 W 19991208  
• JP 34827798 A 19981208

Abstract (en)  
[origin: EP1054225A1] The present invention relates to a plate heat exchanger for three fluids, which allows a first fluid to exchange heat with a second fluid, and then with a third fluid. A preceding-stage heat exchange section (13A) having interplate first fluid paths (f1) for passing the first fluid (La) between the plates and interplate second fluid paths (f2) for passing the second fluid (Lc) between the plates is formed at one side of the plate laminate in a plate laminating direction, and the interplate first fluid paths (f1) and the interplate second fluid paths (f2) are positioned alternately in the plate laminating direction. A succeeding-stage heat exchange section (13B) having interplate first fluid paths (f1) for passing the first fluid (La) between the plates and interplate third fluid paths (f3) for passing the third fluid (Lb) between the plates is formed at the other side of the plate laminate in a plate laminating direction, and the interplate first fluid paths (f1) and the interplate third fluid paths (f3) are positioned alternately in the plate laminating direction. A first fluid crossover path (m) is provided for allowing the first fluid which has passed through the interplate first fluid paths in the preceding-stage heat exchange section to flow into the interplate first fluid paths in the succeeding-stage heat exchange section.  
<IMAGE>

IPC 1-7  
**F28D 9/00**; **F28F 3/08**

IPC 8 full level  
**F28D 9/00** (2006.01); **F25B 15/00** (2006.01); **F25B 15/06** (2006.01)

CPC (source: EP)  
**F28D 9/005** (2013.01); **F28D 9/0093** (2013.01); **F25B 15/008** (2013.01); **F25B 15/06** (2013.01); **F28F 2270/00** (2013.01); **F28F 2270/02** (2013.01)

Citation (search report)  
• [X] US 4327802 A 19820504 - BELDAM RICHARD P  
• [X] DE 19712637 A1 19981001 - BEHR GMBH & CO [DE]  
• [A] EP 0819907 A2 19980121 - LAENGERER & REICH GMBH & CO [DE]  
• [A] DE 19712599 A1 19981001 - VOITH TURBO KG [DE]  
• [A] US 5462113 A 19951031 - WAND STEVEN M [US]  
• See references of WO 0034729A1

Cited by  
CN105003983A; JP2015207535A; EP2080976A1; US2013146246A1; DE102012105604B4; EP3388772A4; DE102010048015B4; DE102015203141A1; FR2846733A1; FR2846736A1; DE102004020602A1; ES2188415A1; EP3511666A4; EP3524913A4; US7334431B2; US10697677B2; DE102016101677B4; WO2004092663A1; WO2020136092A3; WO2018013054A1; DE102010048015A1; US9581367B2; US10883767B2; US11022376B2; WO03046461A1; JP2007506928A; US7469554B2; US8122736B2; WO2004113815A1; WO2004042293A1; WO2004042312A1

Designated contracting state (EPC)  
DE FR IT SE

DOCDB simple family (publication)  
**EP 1054225 A1 20001122**; **EP 1054225 A4 20050112**; **EP 1054225 B1 20070613**; CN 1172158 C 20041020; CN 1290338 A 20010404; DE 69936288 D1 20070726; JP 2000171177 A 20000623; JP 3936088 B2 20070627; WO 0034729 A1 20000615

DOCDB simple family (application)  
**EP 99959689 A 19991208**; CN 99802775 A 19991208; DE 69936288 T 19991208; JP 34827798 A 19981208; JP 9906864 W 19991208