

Title (en)  
TOTAL HEAT EXCHANGE ELEMENT

Title (de)  
GESAMTWÄRMEAUSTAUSCHELEMENT

Title (fr)  
ÉLÉMENT D'ÉCHANGE THERMIQUE TOTAL

Publication  
**EP 2426453 A4 20130109 (EN)**

Application  
**EP 09843988 A 20090428**

Priority  
JP 2009058362 W 20090428

Abstract (en)  
[origin: EP2426453A1] A total heat exchange element (101) includes a first flow passage and a second flow passage extending orthogonal thereto. A first fluid and a second fluid are caused to flow through the first and the second flow passages so that sensible heat as well as latent heat are exchanged between the two fluids. The first flow passage is an undulating flow passage (31) that has a rectangular cross section and is formed by positioning a first wave-form plate member (11) shaped in the form of a wave undulating in the layer stacking direction toward the traveling direction of the fluid and a second wave-form plate member (12) shaped substantially in the same form of a wave as the first wave-form plate member (11), on top of each other and with a predetermined interval therebetween, and further causing spacers (14) to hermetically close two lateral portions with respect to the traveling direction of the fluid. The second flow passage is a straight flow passage (32) that has a substantially triangular cross section and is formed between a flat-plate-like member (13) and one of the first and the second wave-form plate members (11, 12), when the flat-plate-like member (13) is positioned on the wave-like form of the one of the first and the second wave-form plate members (11, 12) so as to be in close contact therewith.

IPC 8 full level  
**F28D 9/00** (2006.01); **F28F 3/00** (2006.01); **F28F 3/08** (2006.01); **F28F 21/00** (2006.01)

CPC (source: EP US)  
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Citation (search report)  
• [A] JP 2003148891 A 20030521 - TOYOTA CENTRAL RES & DEV, et al  
• See references of WO 2010125644A1

Cited by  
CN104279894A; EP3296678A1; FR3055951A1; WO2013159920A1

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