

Title (en)  
HEAT EXCHANGER

Title (de)  
WÄRMETAUSCHER

Title (fr)  
ÉCHANGEUR DE CHALEUR

Publication  
**EP 2857788 A4 20160323 (EN)**

Application  
**EP 13772745 A 20130403**

Priority  
• JP 2012086622 A 20120405  
• JP 2013002327 W 20130403

Abstract (en)  
[origin: US2015027672A1] In a heat exchanger, each of flat tubes (31) has an end portion inserted in a header-collecting pipe (70). When the heat exchanger functions as an evaporator, a refrigerant in a gas-liquid two-phase state upwardly flows in a subspace (71a) located in the header-collecting pipe (70). An effective cross-sectional area A of the subspace (71a) in the header-collecting pipe (70) is set based on a mass flow rate of the refrigerant flowing into the subspace (71a) in the header-collecting pipe (70). The effective cross-sectional area A is obtained by subtracting a projected area A1 which corresponds to a portion of each flat tube (31) located in the subspace (71a) and is projected onto a plane perpendicular to an axial direction of the header-collecting pipe (70) from an area A0 of a cross section of the subspace (71a) which is perpendicular to the axial direction of the header-collecting pipe (70).

IPC 8 full level  
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CPC (source: EP US)  
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Citation (search report)  
• [X] FR 2664371 A1 19920110 - DIESEL KIKI CO [JP]  
• [X] US 2010031698 A1 20100211 - HIGASHIYAMA NAOHISA [JP]  
• See references of WO 2013150795A1

Designated contracting state (EPC)  
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DOCDB simple family (publication)  
**US 2015027672 A1 20150129**; CN 104246414 A 20141224; CN 104246414 B 20160817; EP 2857788 A1 20150408; EP 2857788 A4 20160323; EP 2857788 B1 20181031; ES 2708210 T3 20190409; JP 2013217528 A 20131024; JP 5626254 B2 20141119; WO 2013150795 A1 20131010

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