

Title (en)  
HEAT EXCHANGER AND CORRESPONDING FLAT TUBE AND PLATE

Title (de)  
WÄRMETAUSCHER UND ENTSPRECHENDES FLACHROHR SOWIE PLATTE

Title (fr)  
ECHANGEUR THERMIQUE, TUBE PLAT ET PLAQUE CORRESPONDANTS

Publication  
**EP 2734801 A1 20140528 (FR)**

Application  
**EP 12737293 A 20120720**

Priority  
• FR 1156645 A 20110721  
• EP 2012064334 W 20120720

Abstract (en)  
[origin: WO2013011136A1] The invention concerns a heat exchanger for cooling charge air, said exchanger comprising at least one flat tube for circulation of a fluid, formed by assembling a pair of plates (7) in such a way as to define a first circulation channel (23) and a second circulation channel (25), such that said channels (23, 25) communicate with one another at one end to establish substantially "U"-shaped circulation of said fluid. According to the invention, at least one plate (7) comprises at least one first rib (29) and one second rib (31) which are generally substantially "L"-shaped, such that said at least one first rib (29) or second rib (31) respectively is arranged in said first circulation channel (23) or second circulation channel (25) respectively. The invention also concerns a flat tube for such an exchanger formed from a pair of plates, at least one plate (7) of which comprises at least one first rib (29) and one second rib (31) which are generally substantially "L"-shaped, such that said at least one first rib (29) or second rib (31) respectively is arranged in said first circulation channel (23) or second circulation channel (25) respectively. The invention further concerns such a plate (7) for a heat exchanger flat tube.

IPC 8 full level  
**F28D 1/03** (2006.01); **F28D 9/00** (2006.01); **F28F 3/04** (2006.01)

CPC (source: EP US)  
**F01P 3/00** (2013.01 - US); **F28D 1/0325** (2013.01 - US); **F28D 1/0341** (2013.01 - US); **F28D 9/0043** (2013.01 - US); **F28D 9/0056** (2013.01 - EP); **F28F 3/025** (2013.01 - EP); **F28F 3/044** (2013.01 - EP US); **F28F 3/12** (2013.01 - US); **F28D 2021/0082** (2013.01 - EP US); **F28F 2225/04** (2013.01 - EP)

Citation (search report)  
See references of WO 2013011136A1

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)  
**WO 2013011136 A1 20130124**; CN 103930742 A 20140716; EP 2734801 A1 20140528; FR 2978236 A1 20130125; FR 2978236 B1 20150821; JP 2014522959 A 20140908; MX 2014000859 A 20140430; US 2014345838 A1 20141127

DOCDB simple family (application)  
**EP 2012064334 W 20120720**; CN 201280046065 A 20120720; EP 12737293 A 20120720; FR 1156645 A 20110721; JP 2014520680 A 20120720; MX 2014000859 A 20120720; US 201214233783 A 20120720