

Title (en)  
HEAT EXCHANGER

Title (de)  
WÄRMETAUSCHER

Title (fr)  
ÉCHANGEUR THERMIQUE

Publication  
**EP 2998685 A3 20160330 (DE)**

Application  
**EP 15184640 A 20150910**

Priority  
DE 102014219093 A 20140922

Abstract (en)  
[origin: US2016084583A1] The invention relates to a heat exchanger, in particular exhaust-gas cooler, having tubes of unipartite form or formed from two shell-like plates, which tubes form a first and a second fluid duct, wherein the respective fluid ducts are arranged adjacent to one another, wherein the first fluid duct is designed to be open at at least one of its ends for the inflow and/or outflow of the first fluid, wherein, at the ends, the tubes are, by way of an inward or outward step, designed such that the second fluid ducts are closed at the end side, wherein the step has a greater extent T in the tube longitudinal direction in the corner regions of the tube than between the corner regions.

IPC 8 full level  
**F28F 9/02** (2006.01); **F28D 7/16** (2006.01); **F28D 9/00** (2006.01); **F28F 1/00** (2006.01); **F28F 1/02** (2006.01); **F28F 1/04** (2006.01)

CPC (source: EP US)  
**F02M 26/32** (2016.02 - US); **F28D 7/1661** (2013.01 - US); **F28D 7/1684** (2013.01 - EP US); **F28D 9/0031** (2013.01 - EP US); **F28D 9/0037** (2013.01 - EP US); **F28F 1/006** (2013.01 - EP US); **F28F 1/025** (2013.01 - EP US); **F28F 1/045** (2013.01 - EP US); **F28F 9/0221** (2013.01 - EP US)

Citation (search report)  
• [XAY] WO 2012080039 A2 20120621 - VALEO TERMICO SA [ES], et al  
• [X] EP 1227291 A2 20020731 - MODINE MFG CO [US]  
• [X] JP 2007225190 A 20070906 - MARUYASU & CO LTD  
• [XD] DE 102005034137 A1 20070125 - BEHR GMBH & CO KG [DE]  
• [YD] WO 2014040797 A1 20140320 - BEHR GMBH & CO KG [DE]

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

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 2998685 A2 20160323**; **EP 2998685 A3 20160330**; DE 102014219093 A1 20160324; JP 2016070656 A 20160509; US 10837708 B2 20201117; US 2016084583 A1 20160324

DOCDB simple family (application)  
**EP 15184640 A 20150910**; DE 102014219093 A 20140922; JP 2015184105 A 20150917; US 201514860837 A 20150922