

Title (en)
HEAT EXCHANGER AND HEAT EXCHANGING UNIT

Title (de)
WÄRMETAUSCHER UND WÄRMETAUSCHSYSTEM

Title (fr)
ÉCHANGEUR DE CHALEUR ET UNITÉ D'ÉCHANGE DE CHALEUR

Publication
EP 2977697 A3 20160427 (EN)

Application
EP 15167869 A 20150515

Priority
JP 2014102391 A 20140516

Abstract (en)
[origin: US2015330713A1] A heat exchanger has a plurality of heat exchanger tubes. Each heat exchanger tube has an internal flow path through which a first fluid flows. These heat exchanger tubes are arranged so that an external flow path, through which a second fluid that exchanges heat with the first fluid flows, is formed between each two adjacent heat exchanger tubes. Each two adjacent heat exchanger tubes are bonded together at the inlets and outlets of the internal flow paths in the two heat exchanger tubes. One of each two adjacent heat exchanger tubes is offset with respect to the other heat exchanger tube in a direction perpendicular to an arrangement direction in which these heat exchanger tubes are arranged.

IPC 8 full level
F28D 1/03 (2006.01); **F28D 1/053** (2006.01)

CPC (source: EP US)
F28D 1/0333 (2013.01 - EP US); **F28D 1/05358** (2013.01 - EP US); **F28D 9/0093** (2013.01 - US)

Citation (search report)

- [X] DE 102007032790 A1 20080117 - DENSO CORP [JP]
- [X] US 2006278382 A1 20061214 - BHATTI MOHINDER S [US], et al
- [A] US 2014116672 A1 20140501 - MARTIN MICHAEL A [CA], et al
- [A] US 2014048238 A1 20140220 - TAN DONGMING [US], et al

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)
US 2015330713 A1 20151119; CN 105091630 A 20151125; EP 2977697 A2 20160127; EP 2977697 A3 20160427; JP 2015232435 A 20151224

DOCDB simple family (application)
US 201514702214 A 20150501; CN 201510169406 A 20150410; EP 15167869 A 20150515; JP 2015091712 A 20150428