

Title (en)  
HEAT EXCHANGER WITH LIQUID/GAS MIXER DEVICE HAVING OPENINGS WITH AN IMPROVED SHAPE

Title (de)  
WÄRMETAUSCHER MIT FLÜSSIGKEITS-/GASMISCHER MIT ÖFFNUNGEN MIT VERBESSERTER FORM

Title (fr)  
ECHANGEUR DE CHALEUR AVEC DISPOSITIF MELANGEUR LIQUIDE/GAZ A ORIFICES DE FORME AMELIOREE

Publication  
**EP 3601927 B1 20201209 (FR)**

Application  
**EP 18714591 A 20180320**

Priority  
• FR 1752474 A 20170324  
• FR 2018050666 W 20180320

Abstract (en)  
[origin: WO2018172685A1] The invention relates to a heat exchanger (1) comprising a plurality of plates (2) arranged in parallel so as to define a first series of passages (10) for channelling at least one first fluid (F1) and a second series of passages (20) for channelling at least one second fluid (F2) which is to be brought into a heat-exchanging arrangement with at least said first fluid (F1), a mixer device (3) being arranged in said at least one passage (10) of the first series and comprising at least one first channel (31) for the flow of a first phase (61) of the first fluid (F1) following a direction of flow (z), at least one second channel (32) for the flow of a second phase (62) of the first fluid (F1), and at least one opening (34) fluidically connecting the first channel (31) to the second channel (32). According to the invention, the opening (34) comprises a first portion (34a) leading into the first channel (31), said first portion (34a) having a first cross-section, and a second portion (34b) arranged between the first portion (34a) and the second channel (32), said second portion (34b) having a second cross-section, the first cross-section being higher than the second cross-section.

IPC 8 full level  
**F28F 9/02** (2006.01); **F25J 5/00** (2006.01); **F28D 9/00** (2006.01)

CPC (source: EP RU US)  
**F25J 5/002** (2013.01 - EP US); **F28D 9/0068** (2013.01 - EP US); **F28F 3/08** (2013.01 - RU); **F28F 9/0278** (2013.01 - EP); **F28F 9/028** (2013.01 - EP); **F28F 9/22** (2013.01 - RU); **F25J 2270/18** (2013.01 - EP); **F25J 2270/66** (2013.01 - EP); **F25J 2290/32** (2013.01 - EP US); **F28F 9/0278** (2013.01 - US); **F28F 9/028** (2013.01 - US)

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 2018172685 A1 20180927**; CN 110582682 A 20191217; CN 110582682 B 20210820; EP 3601927 A1 20200205; EP 3601927 B1 20201209; FR 3064345 A1 20180928; FR 3064345 B1 20190329; JP 2020511624 A 20200416; JP 7102434 B2 20220719; RU 2019133350 A 20210421; RU 2019133350 A3 20210527; RU 2750511 C2 20210629; US 11221178 B2 20220111; US 2021108855 A1 20210415

DOCDB simple family (application)  
**FR 2018050666 W 20180320**; CN 201880029751 A 20180320; EP 18714591 A 20180320; FR 1752474 A 20170324; JP 2019551971 A 20180320; RU 2019133350 A 20180320; US 201816496789 A 20180320