

Title (en)
Plate heat exchanger

Title (de)
Plattenwärmetauscher

Title (fr)
Echangeur de chaleur à plaques

Publication
EP 1452816 A3 20071205 (DE)

Application
EP 04000568 A 20040114

Priority
DE 10304733 A 20030206

Abstract (en)
[origin: EP1452816A2] Plate heat exchanger comprises a stack of heat exchanger plates (1, 2), flow channels (3, 4) between the heat exchanger plates for at least two separate media, inlet channels (5) and outlet channels for the media, and a base plate and a top plate (10). A connecting sleeve (12) formed preferably on the top plate communicates with an inlet or outlet channel and has an inlet cross-section (13) and an outlet cross-section (14). The connecting sleeve is connected to an inlet or outlet line (15). A plane of the inlet cross-section and a plane of the outlet cross-section of the connecting sleeve are arranged at an acute angle (20) to each other. The end of the line opening into the inlet or outlet cross-section runs at least partly above the top plate or below the base plate. Preferred Features: The acute angle is preferably 10-70[deg].

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

CPC (source: EP US)
F28D 9/005 (2013.01 - EP US); **F28F 9/0246** (2013.01 - EP US); **F28D 2021/0049** (2013.01 - EP US); **F28F 9/0075** (2013.01 - EP US)

Citation (search report)

- [A] DE 4336952 A1 19940505 - KLOECKNER HUMBOLDT DEUTZ AG [DE]
- [A] EP 0604193 A1 19940629 - CALSONIC CORP [JP]
- [T] EP 1785687 A1 20070516 - MODINE MFG CO [US]
- [DA] EP 0893667 A2 19990127 - LAENGERER & REICH GMBH & CO [DE]
- [DA] WO 9859208 A1 19981230 - ALFA LAVAL AB [SE], et al

Cited by
EP1647796A1; FR3086381A1; ES2324073A1; EP2402702A1; FR2962207A1; EP2154465A3; US10113807B2; US8109326B2; WO2020065225A1; WO2008034812A1; WO2007073304A1; WO2007073305A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

Designated extension state (EPC)
AL LT LV MK

DOCDB simple family (publication)
EP 1452816 A2 20040901; EP 1452816 A3 20071205; EP 1452816 B1 20090325; DE 10304733 A1 20040819; DE 502004009194 D1 20090507; US 2004177950 A1 20040916

DOCDB simple family (application)
EP 04000568 A 20040114; DE 10304733 A 20030206; DE 502004009194 T 20040114; US 77206604 A 20040204