Title (en)

PLATE HEAT EXCHANGER

Title (de)

PLATTENWÄRMETAUSCHER

Title (fr)

ECHANGEUR DE CHALEUR A PLAQUES

Publication

EP 0839308 B1 19991201 (DE)

Application

EP 96907253 A 19960315

Priority

- DE 9600487 W 19960315
- DE 19510847 A 19950317

Abstract (en)

[origin: US6085832A] PCT No. PCT/DE96/00487 Sec. 371 Date Dec. 29, 1997 Sec. 102(e) Date Dec. 29, 1997 PCT Filed Mar. 15, 1996 PCT Pub. No. WO96/29558 PCT Pub. Date Sep. 26, 1996The invention embodies a plate heat exchanger consisting of a stack of ring-shaped plates of identical size and profile, which face each other with their front and rear sides alternately. The heat exchanger surfaces enclosed between an inside and an outside flat edge have a predominantly wave-shaped profile. The waves trace a spiral path and each of them begins and ends in a plateau impressed up to the height of the wave peaks. The plate has a hole in the middle of each plateau. The plates are welded or soldered in the places where they touch in the stack. A heat-releasing medium is introduced to the plate heat exchanger from the periphery and flows through it radially. In the radial counterflow, a heat-absorbing medium flows through the heat exchanger and is introduced and flows away via ring tubes on the front sides. The heat-absorbing, expanding medium has a flow cross section which increases with the radius, and the heat-releasing medium which falls in volume has a decreasing flow cross section. As distinct from known oil coolers, the filer is not connected axially but accommodated in the housing periphery. The result is that the filter has a larger surface and thus also a longerservice life. This also reduces the dynamic load on the heat exchanger (FIG. 2).

IPC 1-7

F28D 9/00

IPC 8 full level

F28D 9/00 (2006.01); **F28F 3/04** (2006.01); **F28F 3/08** (2006.01)

CPC (source: EP US)

F28D 9/0012 (2013.01 - EP US); **F28F 3/042** (2013.01 - EP US); Y10S 165/916 (2013.01 - EP US)

Cited by

EP2157382A3

Designated contracting state (EPC)

AT CH FR GB LI SE

DOCDB simple family (publication)

US 6085832 A 20000711; AT E187244 T1 19991215; CA 2215192 A1 19960926; CA 2215192 C 20031014; DE 19510847 A1 19960919; DE 19510847 C2 20021121; EP 0839308 A1 19980506; EP 0839308 B1 19991201; JP 3836879 B2 20061025; JP H11502295 A 19990223; WO 9629558 A1 19960926

DOCDB simple family (application)

US 93038897 A 19971229; AT 96907253 T 19960315; CA 2215192 A 19960315; DE 19510847 A 19950317; DE 9600487 W 19960315; EP 96907253 A 19960315; JP 52798196 A 19960315