

Title (en)
PLATE HEAT EXCHANGER

Title (de)
PLATTENWÄRMETAUSCHER

Title (fr)
ECHANGEUR DE CHALEUR A PLAQUES

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Application
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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 filter is not connected axially but accommodated in the housing periphery. The result is that the filter has a larger surface and thus also a longer service life. This also reduces the dynamic load on the heat exchanger (FIG. 2).

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