Title (en)

HEAT EXCHANGER

Title (de)

WÄRMETAUSCHER

Title (fr)

ECHANGEUR THERMIQUE

Publication

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Application

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Abstract (en)

[origin: WO2008015314A1] The invention concerns a heat exchanger comprising a plurality of tubular elements or cores (1), each comprising a support cylinder or half-cylinder (2), at least one curved heat exchange plate (3_c, 3_f), each plate separating a first cavity from a second cavity, the first cavity containing a liquid (4) and the second cavity receiving a coolant (5_c, 5_f) causing the thermal expansion or contraction of the plate and thus, respectively, the compression or pressure reduction of the liquid in the first cavity, and an outer retaining tube or half-tube (6). The invention is applicable to a pump and a system. The heat exchanger according to the invention makes it possible to withstand high mechanical stresses. It also makes it possible to better withstand high pressures despite a large diameter of the cylindrical heat exchange plates without having to increase the thickness of these plates, the pressure being exerted on the tubular elements primarily radially, and in particular from the outside to the inside for the thinnest cylindrical heat exchange plate in contact with the cavity containing cold coolant or air.

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