

Title (en)
PLATE HEAT EXCHANGER

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Application
EP 84116425 A 19841228

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Abstract (en)
[origin: EP0147866A2] This invention relates to a plate heat exchanger designed for heat exchange between gaseous media, preferably air. The heat exchanger comprises a plurality of thin plates (1a-c) stacked upon each other and provided with distance members (2) lengthwise in the flow direction in the form of pleats. Every second plate is offset 90 DEG in relation to the adjacent plate in order to form throughgoing ducts (3) of largely rectangular cross-sections. In order to reduce the material thickness and to increase the heat transfer capacity and at the same time to maintain the flow resistance at a low level, according to the invention the plates between the lengthwise distance members (2) are furnished with a friction pressure drop forming fine structure (4) in the form of corrugations essentially at right angles to the distance members. Moreover, the invention provide means to obtain an efficient seal between the separate gas flow passages in the heat exchanger. Thus each contact plate at its two end sides terminating along the distance members displays a lengthwise edge zone area, that each contact plate at its two end sides terminating across the distance members displays a lengthwise part within which a folding edge is arranged. The edges are in order to be joined with an adjacent plate folded around the edge zone area of the adjacent plate and thus form a folded edge which extends over the corresponding edge zone area and encloses it. The folded edge and the enclosing material display a lengthwise pleating which extends along the whole width of the plate in order to lock the folding edge. Within the pleating fine structure is partly deformed by being pressed against each other and thus forms an effective seal between the plates. The heat exchanger plates are preferably made of aluminium.

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Citation (search report)
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