

Title (en)
TUBE-BUNDLE HEAT EXCHANGER COMPRISING ASSEMBLIES/BUILT-IN ELEMENTS FORMED OF DEFLECTION SURFACES AND DIRECTING SECTIONS

Title (de)
ROHRBÜNDEL-WÄRMEÜBERTRAGER MIT BAUGRUPPEN/EINBAUELEMENTEN AUS UMLENKFLÄCHEN UND LEITSTEGEN

Title (fr)
ÉCHANGEUR DE CHALEUR À FAISCEAU TUBULAIRE COMPORTANT DES MODULES/ÉLÉMENTS INTÉGRÉS CONSTITUÉS DE SURFACES DÉFLECTRICES ET DE BARRETTES DE GUIDAGE

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Abstract (en)
[origin: WO2020239734A1] The invention relates to a tube-bundle heat exchanger comprising built-in elements formed by deflection surfaces, windows and directing sections. Using these built-in elements, a constant mixing in the product flow during the heat transfer is achieved and maldistribution and axial backmixing is thereby prevented. At the same time, the flow path is extended and heat transfer is therefore improved. The product flows in the outer chamber (6) of a tube-bundle heat exchanger (1) with an inlet (2) and an outlet (3) for the product and an inlet (4) and an outlet (5) for the heat carrier medium in the tubes (7). The deflection panels (or deflection surfaces) (8) provided with a tube-bundle heat exchanger are modified such that they leave windows (12, 13) open and at least one directing section (10 or 11) is attached on the inlet side and the outlet side of the deflection surface. These directing sections run parallel to the tube axes and cross one another. The flow is divided by the direction sections on the inlet side and directed to the windows in opposing directions, where it then exits on respective opposing sides of the outlet sections and is deflected.

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