

Title (en)
MICROSTRUCTURED HEAT EXCHANGER AND METHOD FOR PRODUCING THE SAME

Title (de)
MIKROSTRUKTUR-WÄRMETAUSCHER UND VERFAHREN ZU DESSEN HERSTELLUNG

Title (fr)
ECHANGEUR DE CHALEUR A MICROSTRUCTURE ET SON PROCEDE DE REALISATION

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Application
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Abstract (en)
[origin: WO0186221A1] The invention relates to a microstructured heat exchanger (5) comprising an especially metal hollow fiber structure (10) through which a liquid or a gas flows, and a matrix body (15) that at least partially surrounds said hollow fiber structure (10). The invention also relates to a method for producing such a microstructured heat exchanger. The matrix body (15) is formed by a graphite body, especially by graphite films that are pressed together. In a preferred embodiment, the matrix body (15) is configured in the shape of a board and communicates with a structural part (17) to be cooled in a heat-conductive manner. According to the inventive method, the hollow fiber structure (10) and at least one first partial matrix body (14) and at least one second partial matrix body (14) are provided, at least one of which can be elastically and/or plastically deformed and has a good thermal conductivity. The hollow fiber structure (10) and the partial matrix bodies (14) are then pressed together to give the microstructured heat exchanger (5).

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