

Title (en)

Heat transfer on a fluid in a microstructure body

Title (de)

Wärmeübertragung auf ein Fluid in einem Mikrostrukturkörper

Title (fr)

Transfert de chaleur sur un fluide dans un corps de microstructure

Publication

EP 1046867 B1 20040407 (DE)

Application

EP 00107948 A 20000414

Priority

DE 19917521 A 19990417

Abstract (en)

[origin: EP1046867A2] Heat transmission to a fluid in a microstructure body involves a primary energy carrier and a secondary fluid as medium for conducting away heat liberated in the micro-heat exchanger. The energy carrier is electrical current, which within the microstructure body (13) is converted directly into heat and then transmitted by heat conduction to the fluid (7) to be heated. The microstructure body is formed in layers and between at least one layer (11) with micro-channels for the fluid an electrically directly or indirectly heated layer (12) is arranged. The heated layer or heating elements (9) is/are made of FeCrAlloy or another metal or a metal alloy with an oxide layer on the surface for insulation.

IPC 1-7

F24H 1/10

IPC 8 full level

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CPC (source: EP)

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Cited by

WO2023159173A1; WO2021195534A1; EP2433970A1; WO2023159171A1; WO2023159172A1; WO2023159175A1; WO2011091962A1; WO2024036206A1; EP2096399A1

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