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 mciro-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 anoth metal or a metal alloy with an oxide layer on the surface for insulation.

IPC 1-7

F24H 1/10

IPC 8 full level

F24H 1/10 (2006.01); **F28D 9/00** (2006.01)

CPC (source: EP)

F24H 1/101 (2013.01); **F28D 9/00** (2013.01); F28F 2260/02 (2013.01)

Cited by

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

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DOCDB simple family (publication)

EP 1046867 A2 20001025; **EP 1046867 A3 20021023**; **EP 1046867 B1 20040407**; AT E263949 T1 20040415; DE 19917521 A1 20001116; DE 19917521 B4 20041021; DE 50005953 D1 20040513

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