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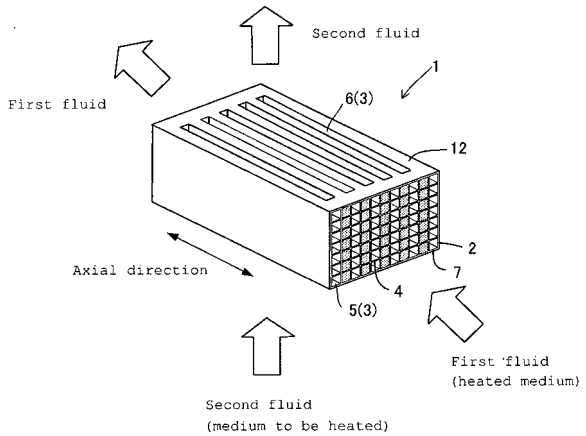
(54) Ceramics heat exchanger and production method thereof

(57) There is provided a heat exchanger having high heat exchange efficiency in comparison with conventional heat exchange elements, heat exchangers, and the like and realizing miniaturization, weight saving, and cost reduction and a production method thereof. In a heat exchange element 1, first fluid circulation portions 5 having a honeycomb structure having a plurality of cells separated by ceramic partition walls 4, extending through in an axial direction from one end face 2 to the other end face 2, and allowing a heated medium as a first fluid to flow therethrough and second fluid circulation portions 6 being separated by ceramic partition walls 4, extending in the direction perpendicular to the axial direction, allowing a second fluid to flow therethrough, transferring heat to a medium to be heated as the second fluid are alternately formed as a unit. The cells 3 on the first fluid circulation portion 5 side are smaller than the cells 3 on the second fluid circulation portion 6 side, and the partition walls have a density of 0.5 to 5 g/cm^3 and a thermal conductivity of 10 to 300 W/mK.

FIG.1



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EUROPEAN SEARCH REPORT

Application Number
EP 10 25 0810

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CLASSIFICATION OF THE APPLICATION (IPC)

INV.
F01N3/28
F28F7/02
F28F21/04
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F01N3/02

TECHNICAL FIELDS SEARCHED (IPC)

F01N

The present search report has been drawn up for all claims

3

Place of search	Date of completion of the search	Examiner
Munich	23 September 2010	Ikas, Gerhard

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