

Title (en)  
HEAT EXCHANGING MEMBER

Title (de)  
WÄRMETAUSCHELEMENT

Title (fr)  
ÉLÉMENT D'ÉCHANGE DE CHALEUR

Publication  
**EP 2623917 A4 20170517 (EN)**

Application  
**EP 11829311 A 20110929**

Priority  
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Abstract (en)  
[origin: EP2623917A1] The present invention aims at providing a technique for inhibiting the breakage due to thermal stress while maintaining temperature efficiency and corrosion resistance. There is provided a heat exchanger element 1 having a cylindrical outer peripheral wall 3 and partition walls 7 which are made of ceramic containing SiC as a main component and separate and form a plurality of cells 5 functioning as passages for a first fluid inside the outer peripheral wall 3. More specifically, in the heat exchanger element 1, the outer peripheral wall 3 and the partition walls 7 mediate heat exchange between the first fluid and the second fluid, and the thickness T of the outer peripheral wall 3, the equivalent circle diameter D calculated from the area of the portion inside the outer peripheral wall 3 in a cross section perpendicular to an axial direction of the outer peripheral wall 3, and thickness t of the partition walls 7 satisfy the following formulae (1) to (3): Formula (1):  $0.3 \text{ mm} \leq T \leq 4.0 \text{ mm}$ , Formula (2):  $15 \text{ mm} \leq D \leq 120 \text{ mm}$ , and Formula (3):  $0.04 \times T \leq t \leq 0.6 \text{ mm}$ .

IPC 8 full level  
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**EP 11829311 A 20110929**; JP 2011072454 W 20110929; JP 2012536568 A 20110929; US 201313852144 A 20130328