

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
• JP 2010219475 A 20100929
• JP 2011072454 W 20110929

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
F28F 7/02 (2006.01); **F28D 7/10** (2006.01); **F28F 21/04** (2006.01)

CPC (source: EP US)
F28D 7/103 (2013.01 - US); **F28F 1/04** (2013.01 - EP US); **F28F 7/02** (2013.01 - EP US); **F28F 21/04** (2013.01 - EP US)

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Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
EP 2623917 A1 20130807; EP 2623917 A4 20170517; EP 2623917 B1 20181212; JP 5819838 B2 20151124; JP WO2012043758 A1 20140224; US 2013213620 A1 20130822; WO 2012043758 A1 20120405

DOCDB simple family (application)
EP 11829311 A 20110929; JP 2011072454 W 20110929; JP 2012536568 A 20110929; US 201313852144 A 20130328