

Title (en)

HEAT EXCHANGER, METHODS AND MEANS FOR MAKING SAME

Title (de)

WÄRMETAUSCHER, VERFAHREN UND MITTEL ZU DESSEN HERSTELLUNG

Title (fr)

ECHANGEUR THERMIQUE PROCEDES ET MOYENS DE FABRICATION DE CET ECHANGEUR

Publication

EP 1579163 A1 20050928 (FR)

Application

EP 03813175 A 20031212

Priority

- FR 0303692 W 20031212
- FR 0215821 A 20021213

Abstract (en)

[origin: US2006048923A1] The invention concerns an elementary heat exchanger comprising a single elongated active monobloc component (10), enclosed in a casing provided with coolant inlet and outlet. The casing consists of two half-shells (11 a-b), welded together (98 a-b, 114 a-b), fixed to the active component. The active component (10) comprises a fishbone cross-section (10 a-b), whereof the bones (12 a-b) are hollow, oblique, embossed and globally symmetrical. The active component is made from a blank made of resistant material (for example a polymer), in the form of biconvex stiff-walled bellows (33 - 35 - 37 - 39), comparable to those of an accordion whereof the peaks have been struck off (36), narrow bases (38) and a spacing (16) between said bases.

IPC 1-7

F28D 9/00

IPC 8 full level

B21D 26/021 (2011.01); **B21D 26/031** (2011.01); **F28D 9/00** (2006.01); **F28F 21/00** (2006.01); **F28F 21/06** (2006.01)

CPC (source: EP KR US)

F28D 9/00 (2013.01 - KR); **F28D 9/0043** (2013.01 - EP US); **F28F 3/00** (2013.01 - KR); **F28F 21/006** (2013.01 - EP US); **F28F 21/065** (2013.01 - EP US); **F28F 2215/06** (2013.01 - EP US)

Citation (search report)

See references of WO 2004055462A1

Cited by

WO2007144498A3

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)

US 2006048923 A1 20060309; AT E356328 T1 20070315; AU 2003300586 A1 20040709; AU 2003300586 B2 20090917; BR 0316761 A 20051025; CA 2509777 A1 20040701; CN 100575851 C 20091230; CN 1720422 A 20060111; DE 60312386 D1 20070419; DE 60312386 T2 20071129; EA 007134 B1 20060630; EA 200500971 A1 20051229; EP 1579163 A1 20050928; EP 1579163 B1 20070307; ES 2283880 T3 20071101; FR 2848653 A1 20040618; FR 2848653 B1 20050311; JP 2006509637 A 20060323; KR 20050085611 A 20050829; MX PA05006251 A 20060127; WO 2004055462 A1 20040701; WO 2004055462 B1 20040916

DOCDB simple family (application)

US 53737405 A 20050603; AT 03813175 T 20031212; AU 2003300586 A 20031212; BR 0316761 A 20031212; CA 2509777 A 20031212; CN 200380104640 A 20031212; DE 60312386 T 20031212; EA 200500971 A 20031212; EP 03813175 A 20031212; ES 03813175 T 20031212; FR 0215821 A 20021213; FR 0303692 W 20031212; JP 2004559825 A 20031212; KR 20057010765 A 20050613; MX PA05006251 A 20031212