

Title (en)

Heat exchanger with several parallel exchange tubes

Title (de)

Wärmetauscher aus mehreren parallel zueinander angeordneten Austauscherrohren

Title (fr)

Echangeur de chaleur avec plusieurs tubes d'échange en parallèle

Publication

**EP 0633444 B1 19980520 (DE)**

Application

**EP 94110457 A 19940705**

Priority

- DE 4322405 A 19930706
- DE 9310827 U 19930720

Abstract (en)

[origin: US5429185A] A heat exchanger has a plurality of parallel heat exchanger tubes with two plane sides and two narrow sides. The heat exchanger tube has a contour with a width and a height in a direction of flow of a first heat-exchanging medium such that the width is much greater than the height. Ribs are connected to the plane sides of the heat exchanger tubes. The ribs are made of a rib band folded to a meander-shape with bent portions. Adjacent ones of the ribs form a flow cross-section for a second heat-exchanging medium. The ribs have a plurality of openings wherein the size of the opening is at least equal in size to the size of the flow cross-section between adjacent ribs.

IPC 1-7

**F28F 3/02**; **F28D 1/03**; **F28F 1/12**

IPC 8 full level

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CPC (source: EP KR US)

**F28D 1/0535** (2013.01 - EP KR US); **F28F 1/128** (2013.01 - EP KR US); **F28F 2215/08** (2013.01 - KR)

Cited by

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Designated contracting state (EPC)

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DOCDB simple family (publication)

**US 5429185 A 19950704**; AT E166450 T1 19980615; AU 6601494 A 19950119; BR 9402643 A 19950404; CA 2127413 A1 19950107; CN 1102475 A 19950510; DE 59405984 D1 19980625; DE 9310827 U1 19930923; EP 0633444 A2 19950111; EP 0633444 A3 19950426; EP 0633444 B1 19980520; IL 110148 A0 19941007; IL 110148 A 19970610; IN 190153 B 20030621; JP H07151481 A 19950616; KR 950003781 A 19950217; RU 2085822 C1 19970727; RU 94023243 A 19960510; TW 247345 B 19950511

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**US 27127994 A 19940706**; AT 94110457 T 19940705; AU 6601494 A 19940629; BR 9402643 A 19940705; CA 2127413 A 19940705; CN 94108286 A 19940705; DE 59405984 T 19940705; DE 9310827 U 19930720; EP 94110457 A 19940705; IL 11014894 A 19940628; IN 831DE1994 A 19940701; JP 18269994 A 19940701; KR 19940015979 A 19940705; RU 94023243 A 19940705; TW 83106325 A 19940712