

Title (en)

Flat tube heat exchanger with deformed tube ends

Title (de)

Flachrohr-Wärmeübertrager mit umgeformtem Flachrohrendabschnitt

Title (fr)

Echangeur de chaleur à tubes plats avec extrémités déformées

Publication

**EP 1213556 B1 20040211 (DE)**

Application

**EP 01130598 A 19971126**

Priority

- DE 19649129 A 19961127
- EP 97120669 A 19971126

Abstract (en)

[origin: EP0845647A1] The heat exchanger includes flat tubes (1) which have one end sector (1a) deformed to fit in a component (3) forming a connection cavity. This end sector is twisted and/or bent to form an adjacent section (1b) of smaller measurement across the cross section. The flat tubes may be twisted about an angle (  $\alpha$  ,  $\beta$  ) between about 10 and 20 degrees at the end fitting in the connection component. This end may be bent in a V shape or a U shape so that the flanks of the bent end sectors are in contact with each other.

IPC 1-7

**F28F 1/02**; **F28F 9/02**

IPC 8 full level

**F28D 1/047** (2006.01); **F28D 1/053** (2006.01); **F28F 1/02** (2006.01); **F28F 1/12** (2006.01); **F28F 9/02** (2006.01)

CPC (source: EP)

**F28D 1/05366** (2013.01); **F28D 1/05383** (2013.01); **F28F 1/025** (2013.01); **F28F 1/126** (2013.01)

Cited by

DE102004042692A1; EP1300644A3; DE10249724B4; CN114483316A; DE10326381B4; JP4772120B2; EP1413844A2; WO2008143711A1; WO2007014561A1; JP2009503428A; EP1486749A2

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DE FR SE

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**DE 19649129 A1 19980528**; DE 59706228 D1 20020314; DE 59707641 D1 20020808; DE 59711309 D1 20040318; EP 0845647 A1 19980603; EP 0845647 B1 20020703; EP 1213556 A1 20020612; EP 1213556 B1 20040211

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