

Title (en)

Heat exchange tube structured on both sides and process for making same

Title (de)

Beidseitig strukturiertes Wärmeaustauscherröhr und Verfahren zu dessen Herstellung

Title (fr)

Tube d'échangeur de chaleur structuré des deux côtés et son procédé de fabrication

Publication

**EP 1312885 B1 20051019 (DE)**

Application

**EP 02024655 A 20021105**

Priority

DE 10156374 A 20011116

Abstract (en)

[origin: DE10156374C1] The heat exchange tube (1) has outer fins (3) and inner fins (20) crossed by secondary grooves (22) Two rolling tools (11, 12) form the outer fins, and the inner fins are formed by two differently shaped rolling mandrels (15, 16), one forming the inner fins themselves, the other forming the secondary grooves in them.

IPC 1-7

**F28F 1/42**; **B21C 37/20**

IPC 8 full level

**F28F 1/36** (2006.01); **B21C 37/20** (2006.01); **B21H 3/04** (2006.01); **B21H 3/10** (2006.01); **F28F 1/42** (2006.01); **F28F 13/04** (2006.01)

CPC (source: EP US)

**B21C 37/207** (2013.01 - EP US); **F28F 1/42** (2013.01 - EP US); **F28F 1/422** (2013.01 - EP US); **Y10T 29/4935** (2015.01 - EP US); **Y10T 29/49377** (2015.01 - EP US); **Y10T 29/49378** (2015.01 - EP US); **Y10T 29/49382** (2015.01 - EP US); **Y10T 29/49385** (2015.01 - EP US); **Y10T 29/49391** (2015.01 - EP US)

Cited by

DE102009060395A1; CN104259282A; CN104117834A; CN102102958A; EP2339283A3; EP4390292A1; WO2024132414A1; EP2339283A2; US9234709B2; US10024607B2

Designated contracting state (EPC)

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DOCDB simple family (publication)

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DOCDB simple family (application)

**DE 10156374 A 20011116**; CN 02150466 A 20021114; DE 50204587 T 20021105; EP 02024655 A 20021105; JP 2002309498 A 20021024; US 10944705 A 20050419; US 29581302 A 20021115