

Title (en)

Structured heat exchanger and method for its production

Title (de)

Strukturiertes Wärmeaustauscherrohr und Verfahren zu dessen Herstellung

Title (fr)

Tuyau d'échange thermique structuré et son procédé de fabrication

Publication

EP 1830151 B1 20100331 (DE)

Application

EP 07002793 A 20070209

Priority

DE 102006008083 A 20060222

Abstract (en)

[origin: EP1830151A1] The exchanger tube has integral external ribs (6) running around the outside of the tube in a helical-line-shaped manner. Roll mandrels (10, 20, 30) are fitted at a free end of a roll mandrel rod (40) and are mounted rotatably with respect to each other, where the mandrels are to be positioned in a working region of roll tools (50, 60, 70). Tertiary grooves in notched internal ribs (2) of the tube are structured on sides, where the internal ribs are crossed over an entire circumference of the tube by spaced-apart secondary grooves. An independent claim is also included for a method of producing a structured heat exchanger tube.

IPC 8 full level

F28F 1/40 (2006.01); **B21C 37/20** (2006.01); **F28F 1/42** (2006.01)

CPC (source: EP KR US)

B21C 37/207 (2013.01 - EP US); **F28F 1/40** (2013.01 - EP US); **F28F 1/42** (2013.01 - EP US); **F28F 1/422** (2013.01 - EP US); **H01P 1/203** (2013.01 - KR); **H01P 3/08** (2013.01 - KR); **H01P 7/08** (2013.01 - KR)

Cited by

DE102017105254A1; ITUB20159298A1; CN108431538A; US10976115B2; DE102008001435A1; WO2017207090A1; WO2015007386A1; WO2017108330A1

Designated contracting state (EPC)

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

DOCDB simple family (publication)

EP 1830151 A1 20070905; EP 1830151 B1 20100331; AT E462949 T1 20100415; BR PI0700587 A 20071106; CN 101025348 A 20070829; DE 102006008083 A1 20070906; DE 102006008083 B4 20120426; DE 502007003266 D1 20100512; ES 2343653 T3 20100805; JP 2007225272 A 20070906; JP 5376763 B2 20131225; KR 20070085126 A 20070827; MX 2007002102 A 20081030; PT 1830151 E 20100524; US 2007193728 A1 20070823; US 8857505 B2 20141014

DOCDB simple family (application)

EP 07002793 A 20070209; AT 07002793 T 20070209; BR PI0700587 A 20070208; CN 200710003190 A 20070225; DE 102006008083 A 20060222; DE 502007003266 T 20070209; ES 07002793 T 20070209; JP 2007032049 A 20070213; KR 20070003125 A 20070111; MX 2007002102 A 20070220; PT 07002793 T 20070209; US 70228807 A 20070205