

Title (en)

Grooved tubes for heat exchangers for single-phased typically aqueous fluids

Title (de)

Mit Innenrippen versehene Rohre für Wärmetauscher für einphasige, wässrige Fluide

Title (fr)

Tubes rainurés pour échangeurs thermiques à fluide monophasique, typiquement aqueux

Publication

EP 1482269 A2 20041201 (FR)

Application

EP 04007195 A 20040325

Priority

FR 0306316 A 20030526

Abstract (en)

The tube has a groove base thickness and a specified external diameter. Helical ribs (2) have specified apex angle, height, base width and helix angle. The ribs are separated by a groove (3) having specified base width. A monophasic liquid e.g. water, and glycol aqueous solution, is circulated in a heat exchanger through the tube. The apex angle lies between 10 and 50 degrees and the helix angle lies between 20 and 50 degrees. An independent claim is also included for a heat exchanger.

IPC 1-7

F28F 1/40

IPC 8 full level

F28F 1/40 (2006.01)

CPC (source: EP US)

F28F 1/40 (2013.01 - EP US); **Y10S 165/51** (2013.01 - EP US); **Y10T 29/49378** (2015.01 - EP US); **Y10T 29/49382** (2015.01 - EP US)

Cited by

EP1804013A1; US9891009B2; WO2015007645A1

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DOCDB simple family (publication)

EP 1482269 A2 20041201; **EP 1482269 A3 20051109**; **EP 1482269 B1 20061129**; AT E347083 T1 20061215; DE 602004003422 D1 20070111; DE 602004003422 T2 20080221; DK 1482269 T3 20070402; ES 2278241 T3 20070801; FR 2855601 A1 20041203; FR 2855601 B1 20050624; PL 1482269 T3 20070430; PT 1482269 E 20070330; US 2005045319 A1 20050303; US 7267166 B2 20070911

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