

Title (en)
Tube and fin heat exchanger

Title (de)
Lamellenwärmetauscher

Title (fr)
Echangeur de chaleur à lamelles

Publication
EP 1701124 A1 20060913 (DE)

Application
EP 06001939 A 20060131

Priority
DE 102005005293 A 20050204

Abstract (en)
u Through embossing, the flow direction of gas-like medium (7) forms a spike-like profile. At the tips of the spikes (9, 10, 11), there is a flow break for generating a turbulent flow pattern (13). The spike embossing may be periodically arranged at specific intervals (P) and between two opposing spikes (9, 11) the embossing height (PH) is such that the ratio of the height to the interval is either equal to or greater than 0.2 and is less than or equal to 0.25. The embossing height may be greater than 2 millimetres, preferably between 2.2 and 2.4 millimetres. There may be through-pipes (17) for heating rods, heating pipes or heating pipe rods, with the opening having no bordered edges.

IPC 8 full level
F28F 1/32 (2006.01); **F28D 1/047** (2006.01); **F28D 1/053** (2006.01); **F28F 17/00** (2006.01); **F28F 19/00** (2006.01)

CPC (source: EP)
F28F 1/32 (2013.01); **F28F 13/12** (2013.01); **F28F 17/00** (2013.01); **F28F 2215/10** (2013.01); **F28F 2275/125** (2013.01)

Citation (applicant)
• DE 19709176 A1 19980917 - LESSING JUERGEN [DE]
• US 2529215 A 19501107 - HICKE GERALD E
• WO 9427105 A1 19941124 - NORISK HYDRO AS [NO], et al
• EP 0469150 A1 19920205 - N PROIDSVODSTEVENNOE OB TRAKTO [SU]
• US 2004251016 A1 20041216 - OH SAI KEE [KR], et al
• DE 1751464 A1 19710715 - AIR PREHEATER

Citation (search report)
• [XY] US 2004251016 A1 20041216 - OH SAI KEE [KR], et al
• [YA] US 2529215 A 19501107 - HICKE GERALD E
• [X] DE 1751244 A1 19710609 - ALFA LAVAL AB
• [X] WO 9427105 A1 19941124 - NORISK HYDRO AS [NO], et al
• [X] EP 0469150 A1 19920205 - N PROIDSVODSTEVENNOE OB TRAKTO [SU]
• [A] US 2002023744 A1 20020228 - KIM KWANG-IL [KR], et al
• [A] US 5927393 A 19990727 - RICHTER IRA Z [US], et al
• [A] US 4449581 A 19840522 - BLYSTONE WAYNE G [US], et al

Cited by
JP2014081101A

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)
DE 102005005293 A1 20060810; EP 1701124 A1 20060913; EP 1701124 B1 20171108

DOCDB simple family (application)
DE 102005005293 A 20050204; EP 06001939 A 20060131