

Title (en)

Heat exchanger tube with finned inner surface

Title (de)

Wärmeaustauschrohr mit berippter Innenoberfläche

Title (fr)

Tube d'échangeur de chaleur avec surface interne ailetée

Publication

EP 1342971 A3 20031008 (DE)

Application

EP 03003894 A 20030221

Priority

DE 10210016 A 20020307

Abstract (en)

[origin: EP1342971A2] The heat exchange tube (1) has a finned internal surface with at least two zones (Z1, Z2, Z3, Z4, Z5) in the circumferential direction, which are differentiated by at least two zone classes (K1, K2). In the zones of at least one class, the fins (2) have a certain height and rise angle, while those (3) of another class have a different height and rise angle

IPC 1-7

F28F 1/40

IPC 8 full level

F16L 9/02 (2006.01); **F28F 1/40** (2006.01); **F28F 13/04** (2006.01); **F28F 13/12** (2006.01)

CPC (source: EP US)

F28F 1/32 (2013.01 - EP US); **F28F 1/40** (2013.01 - EP US); **F28F 13/04** (2013.01 - EP US)

Citation (search report)

- [PX] US 2003009883 A1 20030116 - THORS PETUR [US], et al
- [A] EP 1182416 A2 20020227 - WIELAND WERKE AG [DE]
- [A] EP 1087198 A1 20010328 - DAIKIN IND LTD [JP]
- [A] US 6336501 B1 20020108 - ISHIKAWA MAMORU [JP], et al

Designated contracting state (EPC)

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

DOCDB simple family (publication)

EP 1342971 A2 20030910; **EP 1342971 A3 20031008**; CN 1444003 A 20030924; DE 10210016 A1 20030925; DE 10210016 B4 20040108; DE 10210016 B9 20040909; JP 2003262486 A 20030919; US 2003168209 A1 20030911

DOCDB simple family (application)

EP 03003894 A 20030221; CN 02159555 A 20021227; DE 10210016 A 20020307; JP 2003032221 A 20030210; US 38237803 A 20030306