

Title (en)  
Heat Exchange Coil

Title (de)  
Wärmetauscher-Rohrschlange

Title (fr)  
Echangeur de chaleur à serpentin

Publication  
**EP 0845649 A3 19990414 (EN)**

Application  
**EP 97119398 A 19971106**

Priority  

- JP 31751396 A 19961128
- JP 2334397 A 19970121

Abstract (en)  
[origin: EP0845649A2] A heat exchange coil wherein fin groups (5,6,10) composed of plural plate fins (1) parallel to each other are disposed at a specified interval in the draft direction, and pipes (2) for passing heat medium penetrate into these plural plate fins (1) plural times in the draft direction, thereby enhancing the heat transmission ability and heat exchange efficiency, and preventing drain from dispersing.

IPC 1-7  
**F28F 1/32; F28D 1/047; F24F 3/14**

IPC 8 full level  
**F24F 3/14** (2006.01); **F28D 1/047** (2006.01); **F28D 5/02** (2006.01); **F28F 1/32** (2006.01)

CPC (source: EP)  
**F24F 3/14** (2013.01); **F28D 1/0477** (2013.01); **F28D 5/02** (2013.01); **F28F 1/32** (2013.01)

Citation (search report)  

- [XA] GB 448815 A 19360616 - ARTHUR BERNARD MODINE
- [XY] EP 0401752 A2 19901212 - THERMAL WAERME Kaelte KLIMA [DE]
- [Y] GB 2299656 A 19961009 - TOSHIBA KK [JP]
- [Y] US 3778042 A 19731211 - SCHADE J, et al
- [Y] US 4664182 A 19870512 - MIWA KAZUHARU [JP]
- [XY] FR 2549946 A1 19850201 - THERMETIC STE NLE [FR]
- [X] WO 9411687 A1 19940526 - HEAT PIPE TECHNOLOGY INC [US]
- [Y] PATENT ABSTRACTS OF JAPAN vol. 007, no. 283 (M - 263) 16 December 1983 (1983-12-16)
- [X] PATENT ABSTRACTS OF JAPAN vol. 010, no. 357 (M - 540) 2 December 1986 (1986-12-02)

Cited by  
EP1762805A1; EP1334851A3; EP3511636A1; SE1850041A1; EP2037186A4; EP2657638A1; US9353997B2; WO2022033619A1

Designated contracting state (EPC)  
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)  
**EP 0845649 A2 19980603; EP 0845649 A3 19990414; AU 4441397 A 19980604; CA 2222402 A1 19980528; CN 1184245 A 19980610; ID 18982 A 19980528; KR 19980042618 A 19980817**

DOCDB simple family (application)  
**EP 97119398 A 19971106; AU 4441397 A 19971110; CA 2222402 A 19971127; CN 97122649 A 19971126; ID 973724 A 19971120; KR 19970061370 A 19971120**