

Title (en)  
VAPORIZER-CONDENSER

Title (de)  
VERDAMPFER-VERFLÜSSIGER

Title (fr)  
VAPORISEUR-CONDENSEUR

Publication  
**EP 1730461 A2 20061213 (FR)**

Application  
**EP 04816575 A 20041217**

Priority  
• FR 2004050722 W 20041217  
• FR 0450068 A 20040112

Abstract (en)  
[origin: FR2865027A1] The fin has multiple pores, and multiple corrugations, each including a pair of vertical legs (123) alternatively connected by a top (121) and a base (122) of the corrugation. The top, base and legs are made of sintered aluminum particles. The legs, tops and bases form rectilinear segments in a section transversal with respect to main corrugation direction (D1). The tops and the bases are parallel to each other. An independent claim is also included for a cryogenic air separation unit comprising a vaporizer-condenser that has fins.

IPC 8 full level  
**F28F 3/02** (2006.01); **B22F 5/00** (2006.01); **F25J 3/00** (2006.01); **F25J 3/04** (2006.01); **F28F 13/00** (2006.01); **F28F 21/08** (2006.01)

CPC (source: EP US)  
**B22F 5/00** (2013.01 - EP US); **F25J 3/04412** (2013.01 - US); **F25J 5/002** (2013.01 - US); **F25J 5/005** (2013.01 - EP);  
**F28F 3/025** (2013.01 - EP US); **F28F 13/003** (2013.01 - EP US); **F28F 21/084** (2013.01 - EP US); **F25J 2250/02** (2013.01 - EP US);  
**F25J 2250/04** (2013.01 - EP US); **F25J 2290/32** (2013.01 - EP); **F25J 2290/44** (2013.01 - EP US); **F28D 2021/0033** (2013.01 - EP US);  
**Y10T 428/12014** (2015.01 - EP US)

Citation (search report)  
See references of WO 2005075920A2

Citation (examination)  
• WO 0246669 A1 20020613 - AIR LIQUIDE [FR], et al  
• US 6378605 B1 20020430 - KUTSCHER CHARLES F [US], et al

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 MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**FR 2865027 A1 20050715**; **FR 2865027 B1 20060505**; CN 100478639 C 20090415; CN 1902455 A 20070124; EP 1730461 A2 20061213;  
JP 2007520682 A 20070726; US 2008230212 A1 20080925; US 2010313599 A1 20101216; WO 2005075920 A2 20050818;  
WO 2005075920 A3 20051013

DOCDB simple family (application)  
**FR 0450068 A 20040112**; CN 200480040315 A 20041217; EP 04816575 A 20041217; FR 2004050722 W 20041217;  
JP 2006548332 A 20041217; US 58584304 A 20041217; US 85934410 A 20100819