

Title (en)
COOLED SCREW-TYPE VACUUM PUMP

Title (de)
GEKÜHLTE SCHRAUBENVAKUUMPUMPE

Title (fr)
POMPE A VIDE A VIS REFROIDIE

Publication
EP 1444440 B1 20140604 (DE)

Application
EP 02790310 A 20021030

Priority
• DE 10156180 A 20011115
• EP 0212086 W 20021030

Abstract (en)
[origin: WO03042541A1] The invention relates to a screw-type vacuum pump (1) comprising a pump housing (2, 6) with rotors (3, 4) arranged therein, a liquid cooling system for the rotors and a drive motor (9). In order to improve the cooling of said pump, an external air-flow impelled cooling system is also provided for the pump housing (2,6).

IPC 8 full level
F04C 18/16 (2006.01); **F04C 25/02** (2006.01); **F01C 21/10** (2006.01); **F04C 18/08** (2006.01); **F04C 23/00** (2006.01); **F04C 29/04** (2006.01)

CPC (source: EP KR US)
F04C 18/086 (2013.01 - EP US); **F04C 18/16** (2013.01 - EP KR US); **F04C 29/04** (2013.01 - EP US); **F04C 29/045** (2013.01 - EP US); **F04C 2240/603** (2013.01 - EP US)

Citation (examination)
• DE 19963172 A1 20010628 - LEYBOLD VAKUUM GMBH [DE]
• DE 19820523 A1 19991111 - FRIEDEN PETER [DE]
• US 5542822 A 19960806 - HOLZHEIMER GUENTER DIPL ING [DE], et al

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

DOCDB simple family (publication)
WO 03042541 A1 20030522; CA 2463617 A1 20030522; CN 100422561 C 20081001; CN 1585860 A 20050223; DE 10156180 A1 20030528; DE 10156180 B4 20151015; EP 1444440 A1 20040811; EP 1444440 B1 20140604; HU P0402372 A2 20050329; JP 2005509785 A 20050414; JP 4589001 B2 20101201; KR 100892530 B1 20090410; KR 20050042067 A 20050504; PL 206617 B1 20100831; PL 369467 A1 20050418; US 2004265160 A1 20041230; US 7056108 B2 20060606

DOCDB simple family (application)
EP 0212086 W 20021030; CA 2463617 A 20021030; CN 02822588 A 20021030; DE 10156180 A 20011115; EP 02790310 A 20021030; HU P0402372 A 20021030; JP 2003544339 A 20021030; KR 20047007383 A 20040514; PL 36946702 A 20021030; US 49579604 A 20040514