

Title (en)  
Vacuum pump

Title (de)  
Vakuumpumpe

Title (fr)  
Pompe à vide

Publication  
**EP 2565463 B1 20190123 (DE)**

Application  
**EP 12180536 A 20120815**

Priority  
DE 102011112691 A 20110905

Abstract (en)  
[origin: EP2565463A2] The vacuum pump has a case (24) comprising carbon fiber composite material layer embedded with fibers in matrices. A helical groove (30) is formed between adjacent longitudinal bars (28) such that the direction of the fibers is aligned with the groove, for enabling the rotor portion (22) to resist the action of centrifugal forces during operation of pump. An acute angle region (312) is oriented towards end portion (26) from the outer surface of the case. An independent claim is included for method for manufacturing rotor of vacuum pump.

IPC 8 full level  
**F04D 19/04** (2006.01); **F04D 29/02** (2006.01)

CPC (source: EP)  
**F04D 19/044** (2013.01); **F04D 29/023** (2013.01); **F05C 2253/04** (2013.01); **F05D 2300/6034** (2013.01)

Cited by  
CN105971905A; EP2787218B1; EP2886870B1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**EP 2565463 A2 20130306; EP 2565463 A3 20151014; EP 2565463 B1 20190123**; DE 102011112691 A1 20130307; JP 2013053627 A 20130321; JP 5468117 B2 20140409

DOCDB simple family (application)  
**EP 12180536 A 20120815**; DE 102011112691 A 20110905; JP 2012193204 A 20120903