

Title (en)
ROTOR ASSEMBLY AND VACUUM PUMP THERE WITH

Title (de)
ROTORBAUGRUPPE SOWIE VAKUUMPUMPE DAMIT

Title (fr)
ENSEMBLE ROTOR ET POMPE À VIDE ÉQUIPÉE DE CELUI-CI

Publication
EP 2722528 B1 20180530 (EN)

Application
EP 12800506 A 20120531

Priority
• JP 2011133869 A 20110616
• JP 2012064125 W 20120531

Abstract (en)
[origin: EP2722528A1] Provided are a rotor having a load variation relaxation structure that relaxes load variations in the boundary portion of a cylindrical body and a cylindrical rotating portion, and a vacuum pump in which rotation performance (that is, discharge performance), reliability, and durability are improved over those in the related art by incorporating the cylindrical body. In the vacuum pump, a rotating portion made from a metal (aluminum alloy or the like) is provided with the load variation relaxation structure, which relaxes load variations caused by thermal stresses, in a joined section where the cylindrical rotating portion formed from a different material (FRP or the like) is joined. More specifically, any one from among a gentle taper, a curved section and a taper section, and a corner R is provided in the boundary portion of the rotating portion and the cylindrical rotating portion.

IPC 8 full level
F04D 19/04 (2006.01); **F04D 29/26** (2006.01); **F04D 29/32** (2006.01)

CPC (source: EP)
F04D 19/042 (2013.01); **F04D 19/044** (2013.01); **F04D 29/266** (2013.01); **F04D 29/32** (2013.01)

Citation (opposition)
Opponent : Pfeiffer Vacuum GmbH, 35614 Aßlar, DE
• JP 2011133869 A 20110707 - SEKISUI CHEMICAL CO LTD
• EP 2589814 A1 20130508 - EDWARDS JAPAN LTD [JP]
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• "Wutz Handbuch Vakuumtechnik: Theorie und Praxis," July 2006, article KARL JOUSTEN: "Chapter 6 & 9", pages: 167 - 183 , 319 - 354, XP055363488

Cited by
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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 2722528 A1 20140423; **EP 2722528 A4 20141203**; **EP 2722528 B1 20180530**; CN 103562554 A 20140205; CN 103562554 B 20161221; JP 6047091 B2 20161221; JP WO2012172990 A1 20150223; WO 2012172990 A1 20121220

DOCDB simple family (application)
EP 12800506 A 20120531; CN 201280026312 A 20120531; JP 2012064125 W 20120531; JP 2013520501 A 20120531