

Title (en)

MULTI-STAGE PUMP ROTOR FOR TURBO-MOLECULAR PUMP

Title (de)

MEHRSTUFIGER TURBOMOLEKULARPUMPEN-PUMPENROTOR

Title (fr)

ROTOR DE POMPE À PLUSIEURS ÉTAGES POUR POMPES TURBOMOLÉCULAIRES

Publication

EP 2209995 B1 20121114 (DE)

Application

EP 08804453 A 20080919

Priority

- EP 2008062519 W 20080919
- DE 102007048703 A 20071011

Abstract (en)

[origin: WO2009049988A1] The invention relates to a multi-stage pump rotor (10) for a turbo molecular pump. The pump rotor (10) has at least two separate blade disk rings (17), each having a rotor ring (12) and at least one blade disk (14). A cylindrical reinforcement pipe (18), which surrounds the rotor rings (12) of the blade disk rings (17) on the outside without clearance, is provided between the blade disks (14) of adjacent blade disk rings (17). The reinforcement pipe (18) absorbs a large part of the tangential forces occurring during operation such that the pump rotor (10) has improved stability at high rotor speeds.

IPC 8 full level

F04D 19/04 (2006.01); **F04D 29/32** (2006.01); **F04D 29/64** (2006.01)

CPC (source: EP US)

F04D 19/042 (2013.01 - EP US); **F04D 19/048** (2013.01 - EP US); **F04D 29/321** (2013.01 - EP US); **F04D 29/644** (2013.01 - EP US)

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)

DE 102007048703 A1 20090416; CN 101828040 A 20100908; CN 101828040 B 20120530; EP 2209995 A1 20100728; EP 2209995 B1 20121114; JP 2011501010 A 20110106; JP 5674468 B2 20150225; TW 200925431 A 20090616; TW I453345 B 20140921; US 2010290915 A1 20101118; US 8562293 B2 20131022; WO 2009049988 A1 20090423

DOCDB simple family (application)

DE 102007048703 A 20071011; CN 200880110893 A 20080919; EP 08804453 A 20080919; EP 2008062519 W 20080919; JP 2010528344 A 20080919; TW 97135324 A 20080915; US 68206708 A 20080919