

Title (en)
SPLIT FLOW VACUUM PUMP

Title (de)
SPLITFLOW-VAKUUMPUMPE

Title (fr)
POMPE À VIDE À DEBIT PARTAGÉ

Publication
EP 3112689 A1 20170104 (DE)

Application
EP 15174845 A 20150701

Priority
EP 15174845 A 20150701

Abstract (en)
[origin: JP2017061922A] PROBLEM TO BE SOLVED: To provide a split flow vacuum pump in which a weight of a shaft is reduced while keeping the same strength, so that the split flow vacuum pump having a long shaft can be formed, and in which a rotor shaft has at least one shaft end portion, and the shaft end portion has required strength at low costs. SOLUTION: In split flow vacuum pumps 21, 22 which have at least two radial inlets and in which a vacuum pump 1 has a stator disc and a rotor disc disposed on a shaft, and at least one disc packet is disposed on the shaft 13, at least two grooves 39 and/or hole portions are radially formed in the shaft 13, and they are formed long in an axial direction of the shaft with respect to a circumferential direction of the shaft 13, or the shaft 13 has at least one neck portion in the axial direction. SELECTED DRAWING: Figure 1

Abstract (de)
Die Erfindung betrifft eine Splitflow-Vakuumpumpe (1) mit wenigstens zwei radialen Einlässen (23-26), wobei die Vakuumpumpe (1) Statorscheiben (20) und auf einer Welle (13) angeordnete Rotorscheiben (14-19) aufweist, wobei auf der Welle wenigstens ein Scheibenpaket angeordnet ist, bei der in der Welle (13) in radialer Richtung wenigstens zwei Nuten (39,40) und/oder Bohrungen (83) angeordnet sind, die in axialer Richtung der Welle länger ausgebildet sind als in Umfangsrichtung der Welle oder dass die Welle in axialer Richtung wenigstens eine Einschnürung (102) aufweist und/oder dass auf der Welle wenigstens eine Hülse (59) angeordnet ist.

IPC 8 full level
F04D 19/04 (2006.01); **F04D 29/053** (2006.01)

CPC (source: EP)
F04D 19/04 (2013.01); **F04D 29/053** (2013.01); **F04D 19/042** (2013.01)

Citation (applicant)
DE 4331589 A1 19940630 - BALZERS PFEIFFER GMBH [DE]

Citation (search report)
• [XA] US 5733104 A 19980331 - CONRAD ARMIN [DE], et al
• [IA] DE 202013010209 U1 20150216 - OERLIKON LEYBOLD VACUUM GMBH [DE]
• [XA] EP 1302667 A1 20030416 - BOC GROUP PLC [GB]
• [A] DE 10043235 A1 20020314 - LEYBOLD VAKUUM GMBH [DE]

Cited by
GB2604382A; EP4239200A3

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

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3112689 A1 20170104; **EP 3112689 B1 20181205**; EP 3460249 A1 20190327; EP 3460249 B1 20210324; JP 2017061922 A 20170330; JP 6438916 B2 20181219

DOCDB simple family (application)
EP 15174845 A 20150701; EP 18201126 A 20150701; JP 2016128672 A 20160629