Title (en)

PUMPING SYSTEM FOR GENERATING A VACUUM AND METHOD FOR PUMPING BY MEANS OF THIS PUMPING SYSTEM

Title (de)

PUMPSYSTEM ZUR VAKUUMERZEUGUNG UND VERFAHREN ZUM PUMPEN MIT DIESEM PUMPSYSTEM

Title (fr)

SYSTEME DE POMPAGE POUR GENERER UN VIDE ET PROCEDE DE POMPAGE AU MOYEN DE CE SYSTEME DE POMPAGE

Publication

EP 3201469 B1 20200325 (FR)

Application

EP 14781160 A 20141002

Priority

EP 2014071197 W 20141002

Abstract (en)

[origin: WO2016050313A1] Pumping system for generating a vacuum (SP), comprising a main vacuum pump which is a vane pump (3) having a gas intake side (2) connected to a vacuum chamber (1) and a gas delivery side (4) that leads into a gas discharge duct (5) that discharges the gases to a gas exhaust outlet (8) for exhausting the gases from the pumping system. The pumping system comprises a non-return valve (6) positioned between the gas delivery side (4) and the gas exhaust outlet (8), and an auxiliary vacuum pump (7) connected in parallel with the non-return valve. The main vacuum pump (3) is started up in order to pump the gases contained in the vacuum chamber (1) and to deliver these gases through its gas delivery side (4), and at the same time the auxiliary vacuum pump (7) is started up and continues to pump for the entire time that the main vacuum pump (3) pumps the gases contained in the vacuum chamber (1) and/or for the entire time that the main vacuum pump (3) maintains a defined pressure in the vacuum chamber (1).

IPC 8 full level

F04C 18/12 (2006.01); **F04C 25/02** (2006.01); **F04C 28/02** (2006.01)

CPC (source: EP KR RU US)

F04B 37/14 (2013.01 - EP KR US); **F04B 41/06** (2013.01 - EP KR US); **F04B 45/00** (2013.01 - EP KR); **F04C 18/123** (2013.01 - EP KR RU); **F04C 23/005** (2013.01 - EP KR); **F04C 25/02** (2013.01 - EP KR RU US); **F04C 28/02** (2013.01 - EP KR RU US); **F04C 28/06** (2013.01 - KR); **F04D 19/046** (2013.01 - US); **F04F 5/20** (2013.01 - US); F04B 45/04 (2013.01 - EP US); F04C 28/06 (2013.01 - EP)

Citation (examination)

EP 0401741 A1 19901212 - CIT ALCATEL [FR]

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)

WO 2016050313 A1 20160407; AU 2014407987 A1 20170413; AU 2014407987 B2 20191031; BR 112017006572 A2 20171219; BR 112017006572 B1 20220823; CA 2961979 A1 20160407; CN 107002681 A 20170801; DK 3201469 T3 20200427; EP 3201469 A1 20170809; EP 3201469 B1 20200325; ES 2785202 T3 20201006; JP 2017531754 A 20171026; JP 6512674 B2 20190515; KR 102330815 B1 20211124; KR 20170062513 A 20170607; PL 3201469 T3 20200727; PT 3201469 T 20200423; RU 2017114342 A 20181107; RU 2017114342 A3 20181107; RU 2674297 C2 20181206; TW 201623798 A 20160701; TW I696760 B 20200621; US 10808730 B2 20201020; US 2017284394 A1 20171005

DOCDB simple family (application)

EP 2014071197 W 20141002; AU 2014407987 A 20141002; BR 112017006572 A 20141002; CA 2961979 A 20141002; CN 201480082418 A 20141002; DK 14781160 T 20141002; EP 14781160 A 20141002; ES 14781160 T 20141002; JP 2017516049 A 20141002; KR 20177011440 A 20141002; PL 14781160 T 20141002; PT 14781160 T 20141002; RU 2017114342 A 20141002; TW 104131478 A 20150923; US 201415513574 A 20141002