Title (en)

METHOD FOR OPERATING A VACUUM PUMP SYSTEM

Title (de)

VERFAHREN ZUM BETREIBEN EINES VAKUUMPUMPENSYSTEMS

Title (fr)

PROCÉDÉ PERMETTANT DE FAIRE FONCTIONNER UN SYSTÈME DE POMPAGE À VIDE

Publication

EP 3548745 A1 20191009 (DE)

Application

EP 17801030 A 20171110

Priority

- DE 102016223782 A 20161130
- EP 2017078852 W 20171110

Abstract (en)

[origin: WO2018099710A1] A processing chamber (10) is connected to a lock chamber (12). A vacuum pump system is provided for evacuating the lock chamber (12) and/or the processing chamber (10). Said system comprises a vacuum pump device (18) comprising at least one vacuum pump (20, 22). The vacuum pump system also comprises a valve device (26) for connecting to the lock chamber (12) and a control device (30). For noise reduction, a cyclically occurring operating parameter is determined by means of the control device. From this it is determined at which point the valve is to be opened such that at some point before the valve is opened, the speed of at least one of the vacuum pumps (20, 22) can be reduced. This leads to considerable noise reduction with good evacuation times.

IPC 8 full level

F04B 37/14 (2006.01); **F04B 49/06** (2006.01); **F04C 25/02** (2006.01); **F04C 28/08** (2006.01); **F04C 28/24** (2006.01)

CPC (source: EP KR US)

F04B 35/04 (2013.01 - US); **F04B 37/14** (2013.01 - EP KR US); **F04B 49/065** (2013.01 - EP KR US); **F04B 49/20** (2013.01 - US); **F04C 25/02** (2013.01 - EP KR US); **F04C 28/08** (2013.01 - EP KR US); **F04C 28/24** (2013.01 - EP KR US); F04B 2201/021 (2013.01 - EP KR US); F04B 2201/0601 (2013.01 - EP KR US); F04B 2201/0604 (2013.01 - EP KR US); F04B 2203/0201 (2013.01 - US); F04B 2203/0209 (2013.01 - EP KR US); F04B 2203/0211 (2013.01 - EP KR US)

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)

DE 102016223782 A1 20180530; CN 110036200 A 20190719; EP 3548745 A1 20191009; EP 3548745 B1 20210317; JP 2020501068 A 20200116; JP 7445427 B2 20240307; KR 20190088482 A 20190726; MY 196928 A 20230511; US 11719231 B2 20230808; US 2021381499 A1 20211209; WO 2018099710 A1 20180607

DOCDB simple family (application)

DE 102016223782 A 20161130; CN 201780071741 A 20171110; EP 17801030 A 20171110; EP 2017078852 W 20171110; JP 2019528620 A 20171110; KR 20197015636 A 20171110; MY PI2019003136 A 20171110; US 201716463602 A 20171110