

Title (en)
Vacuum pump

Title (de)
Vakuumpumpe

Title (fr)
Pompe à vide

Publication
EP 2631488 A3 20160817 (DE)

Application
EP 12188584 A 20121015

Priority
DE 102012003680 A 20120223

Abstract (en)
[origin: EP2631488A2] The vacuum pump (1) has a wakening pumping section (30) which comprises a wakening rotor (300). A gas stream inlet pressure stage (40) comprises a rotor component (400). The rotor component is connected with the wakening rotor and is arranged at the axial end (350) of the wakening rotor. The axial end (352) of the wakening rotor is connected with the shat (10). The gas stream inlet pressure stage has an annular element having pumping structure, which is connected with a case (304) of the wakening rotor.

IPC 8 full level
F04D 19/04 (2006.01); **F04D 17/16** (2006.01); **F04D 23/00** (2006.01)

CPC (source: EP US)
F04D 3/00 (2013.01 - US); **F04D 17/168** (2013.01 - EP US); **F04D 19/044** (2013.01 - EP); **F04D 19/046** (2013.01 - EP US); **F04D 23/008** (2013.01 - EP US)

Citation (search report)

- [XA] WO 2006048602 A2 20060511 - BOC GROUP PLC [GB], et al
- [XA] JP 2006090263 A 20060406 - BOC EDWARDS KK
- [XA] DE 60319585 T2 20090326 - EDWARDS LTD [GB]
- [XA] JP 2006342791 A 20061221 - BOC EDWARDS KK
- [XA] JP H02264196 A 19901026 - HITACHI LTD
- [XA] JP 2002332990 A 20021122 - SHIMADZU CORP

Cited by
EP2813710A3; EP3034882A3; EP3267040A1; EP2813710A2

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 2631488 A2 20130828; EP 2631488 A3 20160817; EP 2631488 B1 20191211; DE 102012003680 A1 20130829; JP 2013174238 A 20130905; JP 6027455 B2 20161116; US 2013224001 A1 20130829; US 9422937 B2 20160823

DOCDB simple family (application)
EP 12188584 A 20121015; DE 102012003680 A 20120223; JP 2013022216 A 20130207; US 201313766918 A 20130214