

Title (en)
DRY TYPE PRIMARY VACUUM PUMP AND METHOD FOR CONTROLLING THE INJECTION OF A PURGING GAS

Title (de)
PRIMÄR-VAKUUMPUMPE VOM TYP TROCKENPUMPE UND KONTROLLVERFAHREN DER EINSPRITZUNG EINES REINIGUNGSGASES

Title (fr)
POMPE À VIDE PRIMAIRE DE TYPE SÈCHE ET PROCÉDÉ DE CONTRÔLE DE L'INJECTION D'UN GAZ DE PURGE

Publication
EP 3628870 B1 20211103 (FR)

Application
EP 19198698 A 20190920

Priority
FR 1858887 A 20180927

Abstract (en)
[origin: TW202012788A] The invention relates to a primary vacuum pump (1) of dry type comprising: at least two pumping stages (2a-2e) mounted in series between a suction (3) and a discharge (4) of the vacuum pump (1), two rotors (5) extending in the pumping stages (2a-2e), the rotors (5) being configured to rotate synchronously in reverse direction to drive a gas to be pumped between the suction (3) and the discharge (4), an injection device (9) configured to distribute a purge gas in at least one pumping stage (2a-2e), comprising: at least one injection member (12a-12e), and at least one injection valve (13; 16a-16e) with an on or off control intended to be interposed between a purge gas supply source and the at least one injection member (12a-12e), characterised in that the vacuum pump (1) further comprises a control device (10) configured to control the opening and the closing of the at least one injection valve (13; 16a-16e) to inject a purge gas by successive pulses into at least one pumping stage (2a-2e). The present invention relates also to a method for controlling the injection of a purge gas in such a vacuum pump.

IPC 8 full level
F04C 25/02 (2006.01); **F04C 23/00** (2006.01); **F04C 28/24** (2006.01); **F04C 29/00** (2006.01); **F04D 19/04** (2006.01)

CPC (source: CN EP KR US)
B08B 9/0321 (2013.01 - US); **F04C 23/001** (2013.01 - EP); **F04C 25/02** (2013.01 - CN EP KR); **F04C 28/02** (2013.01 - KR); **F04C 28/24** (2013.01 - CN EP US); **F04C 29/0014** (2013.01 - EP US); **F04C 29/0092** (2013.01 - CN EP US); **F04C 29/124** (2013.01 - KR); **F04C 2210/22** (2013.01 - KR); **F04C 2220/12** (2013.01 - EP KR US); **F04C 2220/28** (2013.01 - EP); **F04C 2270/585** (2013.01 - EP US); **F04C 2280/02** (2013.01 - EP); **F05B 2210/12** (2013.01 - KR)

Cited by
CN115388005A; FR3137139A1; WO2023247083A1

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)
EP 3628870 A1 20200401; **EP 3628870 B1 20211103**; CN 110953153 A 20200403; CN 110953153 B 20230418; FR 3086705 A1 20200403; FR 3086705 B1 20201023; JP 2020063737 A 20200423; KR 20200035872 A 20200406; TW 202012788 A 20200401; TW I804657 B 20230611; US 11585342 B2 20230221; US 2020102960 A1 20200402

DOCDB simple family (application)
EP 19198698 A 20190920; CN 201910911235 A 20190925; FR 1858887 A 20180927; JP 2019172498 A 20190924; KR 20190116757 A 20190923; TW 108125580 A 20190719; US 201916583318 A 20190926