

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
21 November 2024 (21.11.2024)



(10) International Publication Number
WO 2024/235915 A1

(51) International Patent Classification:

F04C 18/344 (2006.01) *F04C 25/02* (2006.01)
F04C 29/12 (2006.01)

(21) International Application Number:

PCT/EP2024/063105

(22) International Filing Date:

13 May 2024 (13.05.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

23305763.7 15 May 2023 (15.05.2023) EP

(71) Applicant: **LEYBOLD FRANCE SAS** [FR/FR]; 640 rue A. Bergès, 26500 Bourg-Lès-Valence (FR).

(72) Inventors: **MOULIN, Christian**; Leybold France SAS, 640, rue A. Bergès, 26500 Bourg-Lès-Valence (FR).
GOURE, Augustin; Leybold France SAS, 640, rue Aris-

tide Bergès, 26500 Bourg-Lès-Valence (FR). **PIU, Frederic**; Leybold France SAS, 640 rue Aristide Bergès, 26500 Bourg-les-Valence (FR). **SERAYET, Mickael**; Leybold France SAS, 640, rue Aristide Bergès, 26500 Bourg-Lès-Valence (FR). **DESPESE, Christophe**; Leybold France SAS, 640, rue Aristide Bergès, 26500 Bourg-Lès-Valence (FR).

(74) Agent: **ARNOLD, Emily Anne**; Edwards Limited, Innovation Drive, Burgess Hill RH15 9TW (GB).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH,

(54) Title: VACUUM PUMP

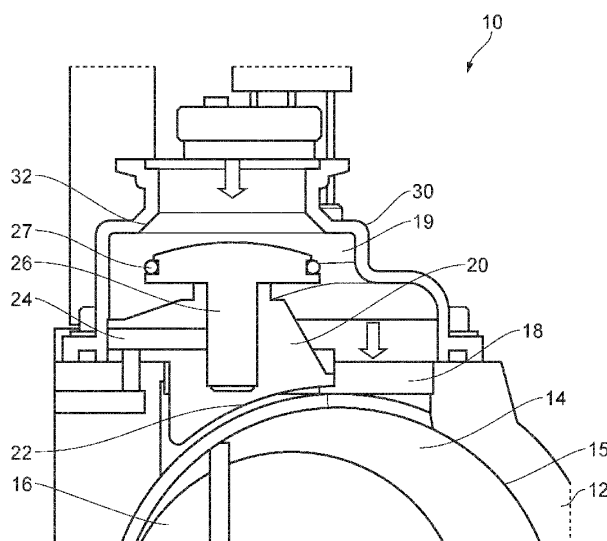


FIG. 1

(57) Abstract: The application describes a rotary vane vacuum pump (10), comprising a stator (12) and an inlet portion (20) together defining an outer surface (15) of a chamber (14), the outer surface of the chamber comprising an inlet for admitting gas to be pumped and an outlet for exhausting gas. The vacuum pump further comprises a rotor (14) housed within the chamber and configured to cooperate with the stator and the inlet portion during operation of the vacuum pump to pump gas from the inlet to the outlet. The inlet portion is mounted within an inlet channel of (19) the vacuum pump and defines at least a portion of the inlet. A surface of the inlet portion facing the chamber (14) forms a portion of the outer surface (15) of the chamber (14).

[Continued on next page]



WO 2024/235915 A1

TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS,
ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))