

Title (en)

Drag vacuum pump with at least one helical stage at the discharge end.

Title (de)

Gasreibungspumpe mit mindestens einer auslassseitigen Gewindestufe.

Title (fr)

Pompe à effet visqueux avec au moins un étage hélicoidal à côté du refoulement.

Publication

**EP 0408792 A1 19910123 (DE)**

Application

**EP 89113318 A 19890720**

Priority

EP 89113318 A 19890720

Abstract (en)

[origin: JPH0357898A] PURPOSE: To secure discharge of dust deposited by performing heavy duty cleaning of a limited stage in the neighbourhood of an outlet and to avoid a return flow of oil by providing a cleaning gas inlet extending along the overall periphery of a gas delivery passage. CONSTITUTION: A capacity extended part 66 is formed by removing a ring 52 and a lower edge part of a screw structural member 56, and an inflow opening 67 extended thereby extends along the overall periphery of a gas delivery passage 20. Thereafter, gas molecules delivered while a friction pump 1 furnished with a cleaning gas inlet 13 is driven move in an arrow 68 direction in the ring gas delivery passage 20, cleaning gas enters a ring collecting passage 62 through a hole 61 and it is distributed along the overall periphery of the pump. Thereafter, cleaning gas passes a passing clearance 65 at high speed and reaches the inside of the capacity extended part 66, and hereby cleaning gas partly becomes still. Thereafter, molecules entrained by cleaning gas are delivered to an outlet 14, a transfer part to an end surface of the inlet side of a ring 53 of a groove bottom 69, that is, an edge 72 is constituted in an acute angle as much as possible, and desired work is promoted.

Abstract (de)

Die Erfindung bezieht sich auf eine Gasreibungspumpe (1) mit mindestens einer auslaßseitigen Gewindestufe (10, 57) mit ringförmigem Gasförderkanal (20); um Staubablagerungen im auslaßseitigen Bereich zu vermeiden oder zu beseitigen, wird vorgeschlagen, daß die Pumpe mit einem sich über den Umfang des Gasförderkanals (20) erstreckenden Spülgaseinlaß ausgerüstet ist.

IPC 1-7

**F04D 19/04**; **F04D 29/68**

IPC 8 full level

**F04D 19/04** (2006.01); **F04D 29/68** (2006.01)

CPC (source: EP US)

**F04D 19/044** (2013.01 - EP US); **F04D 29/681** (2013.01 - EP US); **F05B 2250/25** (2013.01 - EP US); **F05D 2260/607** (2013.01 - EP); **Y10S 415/914** (2013.01 - EP US)

Citation (search report)

- [A] DE 3826710 A1 19890216 - JAPAN ATOMIC ENERGY RES INST [JP], et al
- [A] DE 2526164 A1 19761230 - LEYBOLD HERAEUS GMBH & CO KG
- [A] GB 2206648 A 19890111 - PFEIFFER VAKUUMTECHNIK
- [A] CH 428072 A 19670115 - BBC BROWN BOVERI & CIE [CH]
- [A] PATENT ABSTRACTS OF JAPAN vol. 6, no. 184 (M-157)(1062) 21 September 1982, & JP-A-57 91396 (MITSUBISHI) 7 Juni 82,

Cited by

US5553998A; DE19632874A1; DE19933332A1; DE19804768B4; US6030189A; EP0731278A1; EP0985828A1; FR2783883A1; US6193461B1; US6702544B1; WO9323672A1; WO9715760A1; WO0046508A1; US6224326B1

Designated contracting state (EPC)

CH DE FR GB LI

DOCDB simple family (publication)

**EP 0408792 A1 19910123**; **EP 0408792 B1 19930929**; DE 58905785 D1 19931104; JP 2994005 B2 19991227; JP H0357898 A 19910313; US 5051060 A 19910924

DOCDB simple family (application)

**EP 89113318 A 19890720**; DE 58905785 T 19890720; JP 19086790 A 19900720; US 55472190 A 19900719