Title (en)
RADIAL PISTON PUMP

Title (de)
RADIALKOLBENPUMPE

Title (fr)
POMPE A PISTON RADIAL

Publication
EP 0929743 B1 20021211 (DE)

Application
EP 97939965 A 19970819

Priority
- DE 9701785 W 19970819
- DE 19640596 A 19961001

Abstract (en)
[origin: DE19640596A1] Disclosed is a radial piston pump wherein the fluid to be compressed is drawn through the piston, which can be driven by an eccentric shaft. Piston inlet opening axis is displaced in relation to a centre plane of the drive shaft, parallel to the pistonaxis, so that one of the circumferential edges of the eccentric can be used to control the suction opening.

IPC 1-7 (main, further and additional classification)
F04B 1/04; F04B 1/053

IPC 8 full level (invention and additional information)
F04B 1/04 (2006.01); **F04B 1/053** (2006.01); **F04B 9/04** (2006.01)

CPC (invention and additional information)
F04B 1/0456 (2013.01); **F04B 1/0535** (2013.01); **F04B 9/045** (2013.01); F05C 2201/0478 (2013.01)

Designated contracting state (EPC)
DE ES FR GB IT

EPO simple patent family
DE 19640596 A1 19980402; EP 0929743 A1 19990721; EP 0929743 B1 20021211; ES 2184129 T3 20030401; WO 9814704 A1 19980409

INPADOC legal status

2011-10-31 [PG25 ES] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : ES
- Free text : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES
- Effective date : 20090820

2011-03-31 [PG25 IT] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : IT
- Free text : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES
- Effective date : 20090819

2010-11-30 [PG25 GB] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : GB
- Free text : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES
- Effective date : 20090819

2010-10-28 [REG ES FD2A] ANNOUNCEMENT OF LAPSE IN SPAIN
- Effective date : 20090820

2010-07-30 [PG25 DE] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : DE
- Free text : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES
- Effective date : 20100302

2010-07-30 [PG25 FR] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : FR
- Free text : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES
- Effective date : 20090831

2010-05-21 [REG FR ST] NOTIFICATION OF LAPSE
- Effective date : 20100430

2010-04-28 [GBPC] GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE
- Effective date : 20090819

2008-12-31 [PGFP GB] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE

- Ref Country Code : GB
- Payment date : 20080821
- Year of fee payment : 12

2008-11-28 [PGFP FR] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
- Ref Country Code : FR
- Payment date : 20080813
- Year of fee payment : 12

2008-11-28 [PGFP IT] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
- Ref Country Code : IT
- Payment date : 20080825
- Year of fee payment : 12

2008-10-31 [PGFP DE] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
- Ref Country Code : DE
- Payment date : 20080822
- Year of fee payment : 12

2008-10-31 [PGFP ES] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
- Ref Country Code : ES
- Payment date : 20080828
- Year of fee payment : 12

2004-10-08 [REG FR TP] TRANSMISSION OF PROPERTY

2004-06-09 [REG GB 732E] AMENDMENTS TO THE REGISTER IN RESPECT OF CHANGES OF NAME OR CHANGES AFFECTING RIGHTS (SECT. 32/1977)

2003-12-03 [26N] NO OPPOSITION FILED
- Effective date : 20030912

2003-08-01 [ET] FR: TRANSLATION FILED

2003-04-01 [REG ES FG2A] DEFINITIVE PROTECTION
- Document : ES 2184129 T3

2003-01-23 [REF] CORRESPONDS TO:
- Document : DE 59708963 20030123

2002-12-31 [GBT] GB: TRANSLATION OF EP PATENT FILED (GB SECTION 77(6)(A)/1977)
- Effective date : 20021211

2002-12-11 [AK] DESIGNATED CONTRACTING STATES:
- Kind Code of Ref Document : B1
- Designated State(s) : DE ES FR GB IT

2002-12-11 [REG GB FG4D] EUROPEAN PATENT GRANTED
- Free text : NOT ENGLISH

2001-06-13 [17Q] FIRST EXAMINATION REPORT
- Effective date : 20010502

2000-06-21 [RAP1] TRANSFER OF RIGHTS OF AN APPLICATION
- Owner name : HYDRAULIK-RING GMBH

1999-07-21 [17P] REQUEST FOR EXAMINATION FILED
- Effective date : 19990329

1999-07-21 [AK] DESIGNATED CONTRACTING STATES:
- Kind Code of Ref Document : A1
- Designated State(s) : DE ES FR GB IT