Title (en)

Hydraulic machine with automatic control device attached

Title (de)

Hydraulische Maschine versehen mit automatischer Steuereinrichtung

Title (fr)

Machine hydraulique munie d'un dispositif de commande automatique

Publication

EP 1074745 A1 20010207 (EN)

Application

EP 99123319 A 19991123

Priority

IT PI990047 A 19990806

Abstract (en)

The invention relates a hydraulic machine, specifically a pump (2), with automatic control devices attached to its internal water conduits. Said devices register the presence of pressure and flow of the liquid, automatically providing for the activation of the machine when they register a certain pressure and/or flow, and its deactivation when they register a certain pressure and/or in the absence of flow. Such functions are carried out thanks to the data provided by a delivery indicator (5) and a pressure switch (6) attached to the internal water conduits (3) and connected to a control electronic circuit which regulates the machine functioning. The fluid circulates around the external surfaces of the electric tight motor, cooling it. This allows the pump to be very silent. <IMAGE>

IPC 1-7 (main, further and additional classification)

F04D 15/02; F04D 29/62; F04D 29/66

IPC 8 full level (invention and additional information)

F04D 13/06 (2006.01); **F04D 15/02** (2006.01); **F04D 29/58** (2006.01)

CPC (invention and additional information)

F04D 15/0209 (2013.01); **F04D 13/0653** (2013.01); **F04D 15/0227** (2013.01); **F04D 29/586** (2013.01)

Citation (search report)

- [XY] WO 9836339 A1 19980820 - HYDROSERVICE S R L [IT], et al
- [Y] US 3897178 A 19750729 - PALLOCH HERBERT
- [A] US 5354182 A 19941011 - NIEMIEC ALBIN J [US], et al
- [A] US 5135031 A 19920804 - BURGESS ROY T [US], et al
- [A] US 5738495 A 19980414 - CARMIGNANI CLAUDIO [IT], et al
- [A] WO 9213195 A1 19920806 - JEDRAY PTY LTD [AU]

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Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

EPO simple patent family

EP 1074745 A1 20010207; EP 1074745 B1 20050713; AT 299556 T 20050715; DE 69926123 D1 20050818; DE 69926123 T2 20060601; ES 2245813 T3 20060116; IT 1309857 B1 20020205; IT PI990047 A1 20010206; IT PI990047 D0 19990806

INPADOC legal status

2018-02-28 [PGFP ES] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
- Ref Country Code : ES
- Payment date : 20171204
- Year of fee payment : 19

2018-01-31 [PGFP FR] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
- Ref Country Code : FR
- Payment date : 20171123
- Year of fee payment : 19

2018-01-31 [PGFP DE] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
- Ref Country Code : DE
- Payment date : 20171124
- Year of fee payment : 19

2017-11-23 [REG FR PLFP] FEE PAYMENT
- Year of fee payment : 19

2017-10-31 [PGFP IT] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
- Ref Country Code : IT
- Payment date : 20170925
- Year of fee payment : 19

2016-11-29 [REG FR PLFP] FEE PAYMENT
- Year of fee payment : 18

2016-07-01 [REG FR TP] TRANSMISSION OF PROPERTY
- Owner name : DAB PUMPS S.P.A., IT
- Effective date : 20160527

2016-05-24 [REG ES PC2A] TRANSFER OF PATENT
- Owner name : DAB PUMPS S.P.A.
- Effective date : 20160518

2016-04-18 [REG DE R081] CHANGE OF APPLICANT/PATENTEE
- Owner name : DAB PUMPS S.P.A., MESTRINO, IT
- Free text : FORMER OWNER: LEADER PUMPS GROUP S.P.A., BIENTINA, IT
- Document : DE 69926123

2016-04-18 [REG DE R082] CHANGE OF REPRESENTATIVE
- Document : DE 69926123
- Representative's name : V. BEZOLD & PARTNER PATENTANWAELTE - PARTG MBB, DE

2015-10-29 [REG FR PLFP] FEE PAYMENT
- Year of fee payment : 17

2008-10-31 [PGFP GB] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
- Ref Country Code : GB
- Payment date : 20060117
- Year of fee payment : 7

2007-11-24 [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 : 20061123

2007-08-22 [REG IE MM4A] PATENT LAPSED

2007-07-25 [GBPC] GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE
- Effective date : 20061123

2006-11-23 [PG25 IE] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : IE
- Free text : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES
- Effective date : 20061123

2006-06-21 [26N] NO OPPOSITION FILED
- Effective date : 20060418

2006-04-21 [ET] FR: TRANSLATION FILED

2006-02-14 [PGFP IE] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
- Ref Country Code : IE
- Payment date : 20060214
- Year of fee payment : 7

2006-01-31 [REG CH PL] PATENT CEASED

2006-01-16 [REG ES FG2A] DEFINITIVE PROTECTION
- Document : ES 2245813 T3

2006-01-02 [NLV1] NL: LAPSED OR ANNULLED DUE TO FAILURE TO FULFILL THE REQUIREMENTS OF ART. 29P AND 29M OF THE PATENTS ACT

2005-12-19 [PG25 PT] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : PT
- Free text : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT
- Effective date : 20051219

2005-11-30 [PG25 LU] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : LU
- Free text : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES
- Effective date : 20051130

2005-11-30 [PG25 MC] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO

- Ref Country Code : MC
- Free text : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES
- Effective date : 20051130

2005-11-23 [PG25 CY] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : CY
- Free text : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT
- Effective date : 20051123

2005-10-13 [PG25 DK] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : DK
- Free text : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT
- Effective date : 20051013

2005-10-13 [PG25 GR] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : GR
- Free text : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT
- Effective date : 20051013

2005-10-13 [PG25 SE] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : SE
- Free text : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT
- Effective date : 20051013

2005-08-18 [REF] CORRESPONDS TO:
- Document : DE 69926123 P 20050818

2005-08-10 [REG IE FG4D] EUROPEAN PATENTS GRANTED DESIGNATING IRELAND

2005-07-15 [REG CH EP] ENTRY IN THE NATIONAL PHASE

2005-07-13 [AK] DESIGNATED CONTRACTING STATES:
- Kind Code of Ref Document : B1
- Designated State(s) : AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

2005-07-13 [REG GB FG4D] EUROPEAN PATENT GRANTED

2005-07-13 [PG25 AT] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : AT
- Free text : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT
- Effective date : 20050713

2005-07-13 [PG25 BE] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : BE
- Free text : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT
- Effective date : 20050713

2005-07-13 [PG25 CH] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : CH
- Free text : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT
- Effective date : 20050713

2005-07-13 [PG25 FI] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : FI
- Free text : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT
- Effective date : 20050713

2005-07-13 [PG25 LI] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : LI

- Free text : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT
- Effective date : 20050713

2005-07-13 [PG25 NL] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : NL
- Free text : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT
- Effective date : 20050713

2004-07-21 [RAP1] TRANSFER OF RIGHTS OF AN APPLICATION
- Owner name : LEADER PUMPS GROUP S.P.A.

2002-11-06 [17Q] FIRST EXAMINATION REPORT
- Effective date : 20020923

2001-10-24 [AKX] PAYMENT OF DESIGNATION FEES
- Free text : AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

2001-05-16 [17P] REQUEST FOR EXAMINATION FILED
- Effective date : 20010312

2001-02-07 [AK] DESIGNATED CONTRACTING STATES:
- Kind Code of Ref Document : A1
- Designated State(s) : AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

2001-02-07 [AX] REQUEST FOR EXTENSION OF THE EUROPEAN PATENT TO:
- Free text : AL;LT;LV;MK;RO;SI