Title (en)
Vacuum die pressure casting machine

Title (de)
Nach einem Vakuumverfahren arbeitende Druckgiessmaschine

Title (fr)
Machine à coulée sous vide sous pression

Publication
EP 1057558 A1 20001206 (DE)

Application
EP 00108213 A 20000414

Priority
DE 19925148 A 19990602

Abstract (en)
Vacuum die casting protective gas feed equipment, comprising a gas supply line (14) outside the casting chamber and-or suction box end facing the casting unit, is new. Protective gas feed equipment, for a vacuum die casting machine in which melt is dosed from a holding furnace through a suction pipe (6), comprises a gas supply line (14) arranged outside a casting chamber and/or suction box end region facing the casting unit.

Abstract (de)
Bei der Anwendung des Vakuum-Druckgießverfahrens werden hohe Anforderungen an die zu gießenden Werkstücke gestellt. Unerwünschte Einschlüsse, wie Verunreinigungen und insbesondere Oxide führen zu einer wesentlichen Qualitätsminderung. Damit eine Verbindung der Schmelze mit Luft vermieden wird, schlägt die Erfindung die Zufuhr von Antioxidationsgas derart vor, daß eine einfacher Anbau und ein geringer regeltechnischer Aufwand eine hohe Funktionssicherheit gewährleisten. <IMAGE>

IPC 1-7 (main, further and additional classification)
B22D 17/14; B22D 17/30; B22D 18/06

IPC 8 full level (invention and additional information)
B22D 17/14 (2006.01); **B22D 17/30** (2006.01); **B22D 18/06** (2006.01)

CPC (invention and additional information)
B22D 17/30 (2013.01); **B22D 17/14** (2013.01); **B22D 18/06** (2013.01)

Citation (search report)
- [A] US 5263531 A 19931123 - DRURY PAUL E [US], et al
- [A] US 5246055 A 19930921 - FIELDS JAMES R [US], et al
- [A] EP 0790090 A2 19970820 - MUELLER WEINGARTEN MASCHF [DE]

Cited by
US8813815B2; US8967232B2

Designated contracting state (EPC)
CH DE FR LI

EPO simple patent family
EP 1057558 A1 20001206; EP 1057558 B1 20041201; DE 19925148 A1 20001207

INPADOC legal status

2017-01-31 [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 NON-PAYMENT OF DUE FEES
- Effective date : 20160430

2017-01-31 [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 : 20160502

2017-01-31 [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 : 20161101

2017-01-31 [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 NON-PAYMENT OF DUE FEES
- Effective date : 20160430

2017-01-27 [REG FR ST] NOTIFICATION OF LAPSE
- Effective date : 20161230

2016-11-30 [REG CH PL] PATENT CEASED

2016-11-01 [REG DE R119] APPLICATION DEEMED WITHDRAWN, OR IP RIGHT LAPSED, DUE TO NON-PAYMENT OF RENEWAL FEE
- Document : DE 50008799

2015-08-31 [PGFP FR] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
- Ref Country Code : FR
- Payment date : 20150422
- Year of fee payment : 16

2015-07-31 [PGFP DE] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
- Ref Country Code : DE
- Payment date : 20150422
- Year of fee payment : 16

2015-07-31 [PGFP CH] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
- Ref Country Code : CH
- Payment date : 20150422
- Year of fee payment : 16

2015-04-22 [REG FR PLFP] FEE PAYMENT
- Year of fee payment : 16

2015-03-31 [REG CH PCAR] CHANGE OF THE ADDRESS OF THE REPRESENTATIVE
- Free text : NEW ADDRESS: EIGERSTRASSE 2 POSTFACH, 3000 BERN 14 (CH)

2005-11-23 [26N] NO OPPOSITION FILED
- Effective date : 20050902

2005-09-30 [ET] FR: TRANSLATION FILED

2005-02-15 [REG CH NV] NEW AGENT
- Representative's name : KELLER & PARTNER PATENTANWAELTE AG

2005-01-05 [REF] CORRESPONDS TO:
- Document : DE 50008799 P 20050105

2004-12-15 [REG CH EP] ENTRY IN THE NATIONAL PHASE

2004-12-01 [AK] DESIGNATED CONTRACTING STATES:
- Kind Code of Ref Document : B1
- Designated State(s) : CH DE FR LI

2004-07-14 [RTI1] TITLE (CORRECTION)
- Free text : VACUUM DIE PRESSURE CASTING MACHINE

2004-03-10 [17Q] FIRST EXAMINATION REPORT
- Effective date : 20040127

2001-08-22 [AKX] PAYMENT OF DESIGNATION FEES
- Free text : CH DE FR LI

2001-04-04 [17P] REQUEST FOR EXAMINATION FILED
- Effective date : 20010131

2000-12-06 [AK] DESIGNATED CONTRACTING STATES:
- Kind Code of Ref Document : A1
- Designated State(s) : CH DE FR LI

2000-12-06 [AX] REQUEST FOR EXTENSION OF THE EUROPEAN PATENT TO:
- Free text : AL;LT;LV;MK;RO;SI