Title (en)
Device with junction of drilled holes

Title (de)
Vorrichtung mit Bohrungsverschneidung

Title (fr)
Dispositif avec jonction de perçages

Publication
EP 0999361 A2 20000510 (DE)

Application
EP 99121000 A 19991105

Priority
DE 19851286 A 19981106

Abstract (en)
Apparatus comprises a solid body (2) with bore intersections (4, 5, 6) bombarded with inner pressure and inserted into the solid body, and pressure producing devices (1) arranged outside on the solid body so that they apply a tension in the body which opposes the tension produced by the inner pressure of the bore intersections.

Abstract (de)
Es wird eine Vorrichtung vorgestellt, bei der in einem Festkörper eine mit Innendruck beaufschlagte Bohrungsverschneidung eingebracht ist und bei der außen am Festkörper Druckerzeugungsmittel derart angeordnet sind, daß diese in Festkörper eine Spannung einbringen, die der von dem Innendruck der Bohrungsverschneidung erzeugten Spannung entgegenwirkt. <IMAGE>

IPC 8 full level (invention and additional information)
F02M 59/44 (2006.01); **F02M 63/02** (2006.01)

CPC (invention and additional information)
F02M 59/44 (2013.01); **F02M 63/0225** (2013.01)

Cited by
DE10029425A1; DE10029425B4

Designated contracting state (EPC)
DE FR GB IT

EPO simple patent family
EP 0999361 A2 20000510; EP 0999361 A3 20031210; EP 0999361 B1 20070321; DE 19851286 A1 20000518; DE 19851286 C2 20010517; DE 59914263 D1 20070503; DE 59914795 D1 20080807; EP 1731750 A2 20061213; EP 1731750 A3 20061227; EP 1731750 B1 20080625

INPADOC legal status

2014-11-28 [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 : 20131202

2014-08-29 [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 : 20140603

2014-08-28 [REG DE R119] APPLICATION DEEMED WITHDRAWN, OR IP RIGHT LAPSED, DUE TO NON-PAYMENT OF RENEWAL FEE
- Document : DE 59914263
- Effective date : 20140603

2014-08-22 [REG FR ST] NOTIFICATION OF LAPSE
- Effective date : 20140731

2013-01-31 [PGFP DE] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
- Ref Country Code : DE
- Payment date : 20121130
- Year of fee payment : 14

2013-01-31 [PGFP FR] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
- Ref Country Code : FR
- Payment date : 20121130
- Year of fee payment : 14

2008-04-30 [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 FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT
- Effective date : 20070321

2008-02-27 [26N] NO OPPOSITION FILED
- Effective date : 20071227

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 FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT
- Effective date : 20070321

2007-10-17 [GBV] GB: EP PATENT (UK) TREATED AS ALWAYS HAVING BEEN VOID IN ACCORDANCE WITH GB SECTION 77(7)/1977
- Effective date : 20070321

2007-08-17 [ET] FR: TRANSLATION FILED

2007-05-03 [REF] CORRESPONDS TO:
- Document : DE 59914263 P 20070503

2007-03-21 [AK] DESIGNATED CONTRACTING STATES:
- Kind Code of Ref Document : B1
- Designated State(s) : DE FR GB IT

2007-03-21 [REG GB FG4D] EUROPEAN PATENT GRANTED
- Free text : NOT ENGLISH

2005-04-20 [17Q] FIRST EXAMINATION REPORT
- Effective date : 20050308

2004-09-01 [AKX] PAYMENT OF DESIGNATION FEES
- Designated State(s) : DE FR GB IT

2004-03-24 [17P] REQUEST FOR EXAMINATION FILED
- Effective date : 20040119

2003-12-10 [AK] DESIGNATED CONTRACTING STATES:
- Kind Code of Ref Document : A3
- Designated State(s) : AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

2003-12-10 [AX] REQUEST FOR EXTENSION OF THE EUROPEAN PATENT TO:
- Countries : AL LT LV MK RO SI

2003-12-10 [RIC1] CLASSIFICATION (CORRECTION)
- IPC : 7F 02M 55/02 A

2003-12-10 [RIC1] CLASSIFICATION (CORRECTION)
- IPC : 7F 02M 59/44 B

2003-12-10 [RIC1] CLASSIFICATION (CORRECTION)
- IPC : 7C 21D 7/02 B

2003-12-10 [RIC1] CLASSIFICATION (CORRECTION)
- IPC : 7F 16L 41/02 B

2000-05-10 [AK] DESIGNATED CONTRACTING STATES:
- Kind Code of Ref Document : A2
- Designated State(s) : AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

2000-05-10 [AX] REQUEST FOR EXTENSION OF THE EUROPEAN PATENT TO:
- Free text : AL;LT;LV;MK;RO;SI