

PatBase - Search results 01 September 2018

Search query (4): fn=(45000431 or 45000431 or 6186363 or 29457683 or 29457683 or 45000431 or 45000431 or 50933301 or 50933301 or 50933301 or 29457683 or 33079903 or 31777864 or 34246064 or 42750876 or 45000431 or 54974583 or 3154124 or 3507066 or 3507066 or 29457683 or 13384194 or 33079903 or 34246064 or 31777864 or 45000431 or 54974583 or 45000431 or 50933301 or 50933301 or 50933301 or 62469246 or 19637890 or 21923881 or 29767439 or 955394 or 1004676 or 3826838 or 1364602 or 1332168 or 1424022 or 1370507 or 5048127 or 5048127 or 1393749 or 8654396 or 2412730)

Results: 27**Search history**

Search PN=(WO/2016/079662) (Results 1)

1:

Search fn=(7205173 or 5048127 or 4980205 or 54080285) (Results 4)

2:

Search fn=(43924932 or 11506596 or 3810807 or 9303609 or 32381923 or 4377481 or 8092955 or 2075588 or 2163595 or 1946612 or 5917648 or 3810807 or 2816818 or 9454179 or 1946612 or 3144444 or 3144444 or 4378685 or 4378685 or 4426146 or 4426146 or 11271781 or 11271781 or 20689377 or 20689377 or 59694174 or 57226476 or 28881712 or 29540760 or 30257080 or 28423610 or 32478501 or 32478501 or 33367216 or 31816577 or 34204256 or 42226583 or 42854222 or 43349192 or 43781575 or 43924932 or 44230233 or 44968011 or 47486723 or 47677294 or 47677277 or 47678034 or 47845193 or 48741286 or 59337186 or 62152594 or 59694174 or 5048127 or 4377481 or 7445543 or 2336949 or 3796230 or 1907575 or 3888471 or 1876147 or 2075588 or 2011907 or 4472418 or 2163595 or 4688960 or 4790560 or 24048362 or 2049086 or 4513755 or 4980205 or 2115094 or 5055248 or 5055265 or 2099609 or 2105577 or 15365284 or 22417002 or 2494959 or 2196725 or 24048362 or 1946612 or 2240048 or 22417002 or 8116581 or 3810807 or 3020756 or 2792263 or 2816818 or 3028626 or 3112414 or 3144444 or 15328643 or 4210009 or 4369333 or 4378685 or 4426146 or 4483197 or 5212356 or 3698425 or 30511664 or 7222837 or 30511664 or 3398186 or 30511664 or 11560782 or 11594804 or 11704207 or 9501156 or 10169212 or 9454179 or 10808387 or 11417758 or 8820347 or 11360619 or 12209630 or 12331370 or 11506596 or 11371746 or 28851435 or 20689377 or 14946290 or 29469388 or 20661494 or 29490353 or 15164681 or 15499004 or 32381923 or 15877030 or 30397096 or 30257080 or 29540760 or 28881712 or 28423610 or 32478501 or 34204256 or 33367216 or 32478501 or 44230233 or 43924932 or 31816577 or 47678034 or 43349192 or 44968011 or 47677277 or 42854222 or 47486723 or 47845193 or 47677294 or 42226583 or 53522970 or 59694170 or 59233267 or 62152594 or 59694174 or 59233263 or 24048362 or 28881712 or 43924932 or 53522970 or 57425865 or 59694174 or 62469246 or 66639344 or 66936558 or 10169212 or 12331370 or 11271781 or 20689377 or 20689377 or 21923881 or 982808 or 7394437 or 3826838 or 3785167 or 1158352 or 1372292 or 5048127) (Results 117)

Search fn=(45000431 or 45000431 or 6186363 or 29457683 or 29457683 or 45000431 or 45000431 or 50933301 or 50933301 or 50933301 or 29457683 or 33079903 or 31777864 or 34246064 or 42750876 or 45000431 or 54974583 or 3154124 or 3507066 or 3507066 or 29457683 or 13384194 or 33079903 or 34246064 or 31777864 or 45000431 or 54974583 or 45000431 or 45000431 or 50933301 or 50933301 or 50933301 or 62469246 or 19637890 or 21923881 or 29767439 or 955394 or 1004676 or 3826838 or 1364602 or 1332168 or 1424022 or 1370507 or 5048127 or 5048127 or 1393749 or 8654396 or 2412730) (Results 27)

1) Family number: 19637890 (US1754641A)

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Title: PRESSURE-RELIEF APPARATUS

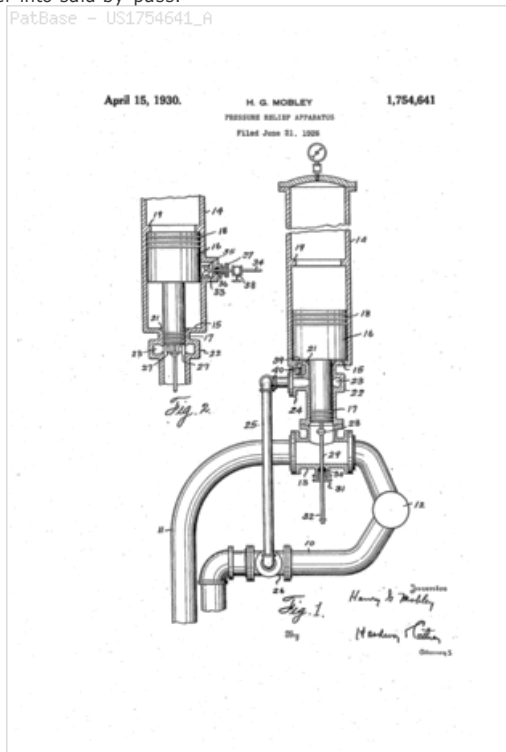
Abstract: 1. 'fn :L pressure control system including zz lens' pressure linu and :\\ high pressure line, a cj>fliw<lt;lc1-uomxaced into said high pmasure lluv and lumvln-g its outer und enlarged, u Hr<gt;::f>i11g }>_gt;lunge1'-like valve in said _lt;:y1in<lt;lc1', f<lt;u~m<lt;~zl to ("I'lf())Tll1 to the custom' of and in Work in wid cylinder, :l bypass controlled luj' swirl vnhu and l'O1\\'42(Z_illg' the reduced end ci' fszxid c_VI?x1<lt;l_1'i11\$o the lnw pressure line and having :xv port 11l'\\1'OUgll which it is also com nwcted into the enlarged end of the cylinder T5 BI] B5 and a check valve controlling said port and a.r~ ranged to permit the discharge o fluid from said cylinder into said by-pass.

Classifications:**International (IPC 8-9):** G05D16/10 (Advanced/Invention);

G05D16/04 (Core/Invention)

CPC: Y10S137/906 Y10T137/7853 Y10T137/7904 Y10T137/7925

Y10T137/7927 F04D15/0011 F04D15/0209 F16K17/065 F16K31/1223

European: G05D16/10**US:** 137/514.7 137/528 137/538 137/539 137/906**Family:**

Publication number	Publication date	Application number	Application date
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Priority:

US19260117220 19260621

Probable Assignee:

MOBLEY HENRY G

Assignee(s): (std):

MOBLEY HENRY G

Inventor(s): (std):

MOBLEY HENRY G

2) Family number: 21923881 (US2798561A)

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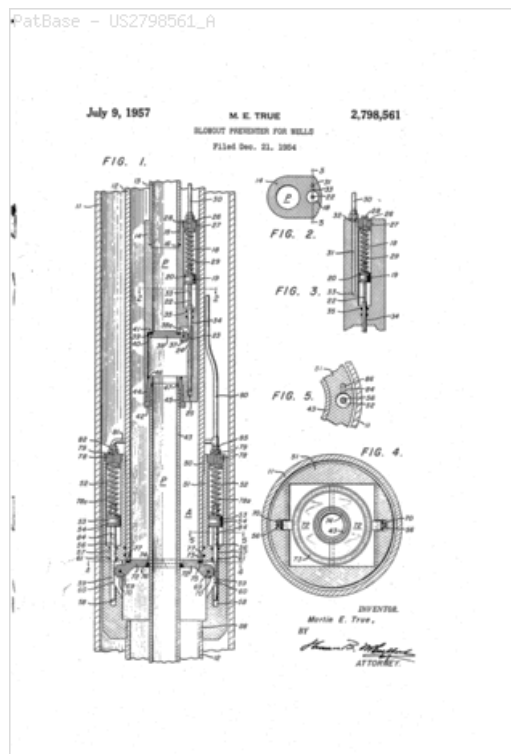
Title: BLOWOUT PREVENTER FOR WELLS

Abstract: (Claim 1) ions and being provided with second and third piston arms, respectively, said second and third piston arms having second and third racks, respectively, provided thereon, second and third biasing means arranged in said second and third pressure chambers, respectively, adapted to urge said second and third pistons to said first positions, second and third valve members pivotally secured to said second mandrel, said second and third valve members having teeth thereon engaging with said second and third racks, respectively, said valve members being adapted to close off the annulus between said inner and outer pipes from fluid flow therethrough when said pistons are in said first positions, means 'connected to said second mandrel fluidly communicating' said second and third pressure chambers with a source of fluid pressure, said fluid pressure being adapted to move said second and third pistons against the bias of said second and third biasing means, respectively. 3.

Classifications:**International (IPC 8-9):** E21B17/18 E21B34/10 (Advanced/Invention);

E21B34/00 (Advanced/Non-invention);

E21B17/00 E21B34/00 (Core/Invention)

International (IPC 1-7): E21B33/04**CPC:** E21B17/18 E21B34/10 E21B2034/005**European:** E21B17/18 E21B34/10 P21B34/00F**US:** 166/321 251/1.1 251/228 251/250**Family:**

Publication number	Publication date	Application number	Application date
US2798561 A	19570709	US19540476707	19541221

Priority:

US19540476707 19541221

Probable Assignee: EXXON MOBIL CORP**Assignee(s): (std):** EXXON MOBIL CORP ; EXXON RESEARCH ENGINEERING CO**Assignee(s):** ESSO RESEARCH AND ENGINEERING CO ; ESSO RESEARCH AND ENGINEERING COMPANY**Inventor(s): (std):** TRUE MARTIN E**3) Family number: 29767439 (US3078923A)**

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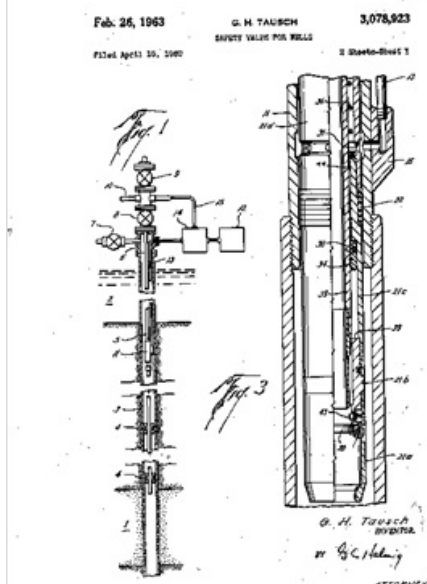
Title: SAFETY VALVE FOR WELLS

Abstract: 941,525. Fluid-pressure servomotor control systems. CAMCO Inc. March 21, 1961 [April 15, 1960], No. 10238/61. Heading G3P. [Also in Divisions E1 and F2] A subsurface safety valve, e. g. for oil wells, comprises a hinged valve 20, Fig. 2B spring-loaded to close on a seat 40 on a sleeve housing 21a-21g, Figs. 2A, 2B removably but sealingly mounted within a production pipe 11, and opened by a sleeve 35 moving against a spring 36 when pressure via 13, 31 acts on differential pistons 33, 34 moving in chambers 31, 32 connected by a restricted passage 44, so that should pressure in conduit 13 fail due to breakage or operation of a surface valve in response to pressure or temperature of the production oil, spring 36 lifts sleeve 35 and valve 20 closes the production pipe. In order to balance pressures across valve 20 before opening it, sleeve 35 first opens by-pass valve 43. The sleeve housing 21a-21g is secured in the pipe 11 by a portion 21 which slides downwards until a boss 25 projects dogs 23 into a groove 19 and teeth 29 engage spring ratchet 30, the ratchet being sheared if the housing is to be withdrawn.

Classifications:**International (IPC 8-9):** E21B34/10 (Advanced/Invention);

E21B34/00 (Advanced/Non-invention);

E21B34/00 (Core/Invention)



Publication number	Publication date	Application number	Application date
GB941525 A	19631113	GB19610010238	19610321
US3078923 A	19630226	US19600022518	19600415

US19600022518 19600415

Probable Assignee:	CAMCO INC
Assignee(s): (std):	CAMCO INC
Inventor(s): (std):	TAUSCH GILBERT H

Title: DOWN HOLE SIDEWALL TUBING VALVE

Abstract: (Claim 1) 1. 1. A system to facilitate the use of pump down tools in a well bore which comprises: a string of tubing suspended in the casing of such well bore; a packer closing the annulus between the lower end of the tubing string and the casing; a tubing port in the tubing string just above the said packer; a valve for closing said tubing port which includes a sleeve stem surrounding said tubing and having a circulating port therein; a piston attached to the upper end of said sleeve stem; housing means including a sleeve stem housing enclosing said sleeve stem and a piston housing surrounding said piston, said sleeve stem housing having a circulating slot adjacent the said tubing port, said circulating port of said sleeve stem when in said sleeve stem's upper position being aligned with said circulating slot of said sleeve stem housing and with said tubing port, said sleeve stem in its lower position closing said housing port and said tubing port; resilient means in said piston housing urging said piston downwardly; port means in said piston housing below said piston such that pressure of

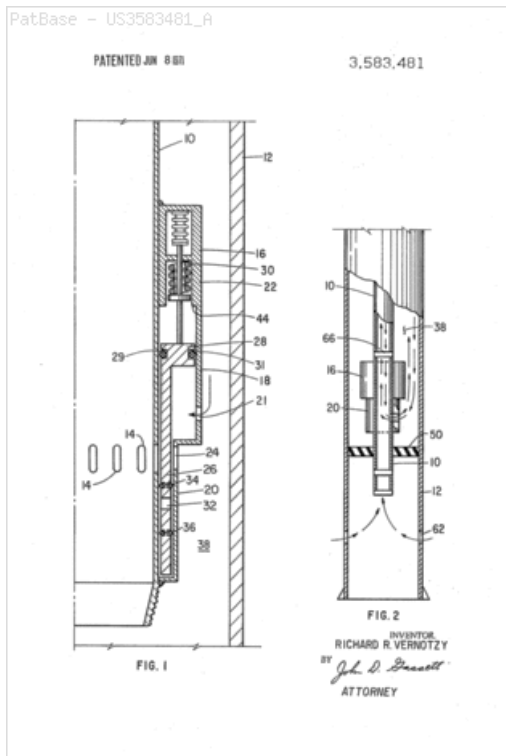
International (IPC 8-9): E21B23/08 E21B34/10 (Advanced/Invention);
E21B23/00 E21B34/00 (Core/Invention)

International (IPC 1-7): E21B33/10 E21B33/12

CPC: E21B23/08 E21B34/10

European: E21B23/08 E21B34/10

US: 166/156 166/184 166/321

**Family:**

Publication number	Publication date	Application number	Application date
US3583481 A	19710608	US19690855518	19690905

Priority:

US19690855518 19690905

Probable Assignee:

PAN AMERICAN PETROLEUM CORP

Assignee(s): (std):

PAN AMERICAN PETROLEUM CORP

Inventor(s): (std):

VERNOTZY RICHARD R

Inventor(s):

RICHARD R VERNOTZY

5) Family number: 1004676 (US3662834A)

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Title: METHODS AND APPARATUS FOR COMPLETING PRODUCTION WELLS

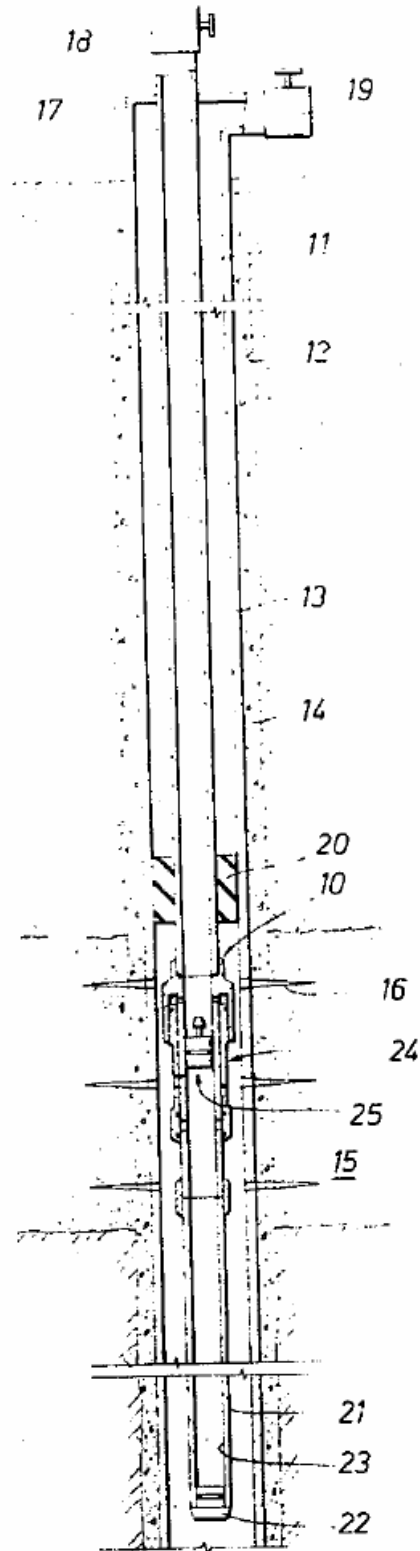
Abstract: This application discloses new and improved methods and apparatus for completing production wells having perforations which either are to be cleaned or penetrate earth formations which are to be fractured, acidized, or treated such as, for example, to inhibit the subsequent production of unconsolidated formation materials. To practice the present invention, a new and improved production tool is arranged for coupling into a string of production tubing and includes a typical well packer having an elongated tubular member dependently coupled therebelow and capped at its lower end for defining an enclosed chamber of a substantial volume below the packer which is initially maintained at a reduced pressure by a new and improved normally-closed pressure-actuated valve arranged at the upper end of the tubular member. The production string and the tool are installed in a cased well bore with the packer being set above a previously-perforated interval traversing an earth formation which is to be subsequently produced. Once the customary wellhead equipment is installed to provide communication from the surface with the tubing, the normally-closed valve is selectively opened by increasing the pressure of the fluids in the production string above the packer. Upon opening of this valve, formation fluids will be suddenly exhausted into the reduced-pressure chamber for removing contaminants that may have previously entered the formation following the perforation of the casing so as to leave only uncontaminated formation materials immediately surrounding the perforations. Thereafter, a selectively-releasable tubing plug in the production tool above the normally-closed valve is removed to permit selected fluids to be pumped by way of the production string through the perforations and into the adjacent earth formations.

Classifications:**International (IPC 8-9):** E21B34/10 E21B34/14

E21B43/00 (Advanced/Invention);

E21B34/00 E21B43/00 (Core/Invention)

International (IPC 1-7): E21B43/00 E21B43/16**CPC:** E21B34/10 E21B34/14 E21B43/00**European:** E21B34/10 E21B34/14 E21B43/00**US:** 166/226 166/314 166/319 166/374 166/380 251/347

**Family:**

Publication number	Publication date	Application number	Application date
US3662834 A	19720516	US19700043067	19700603

Priority:

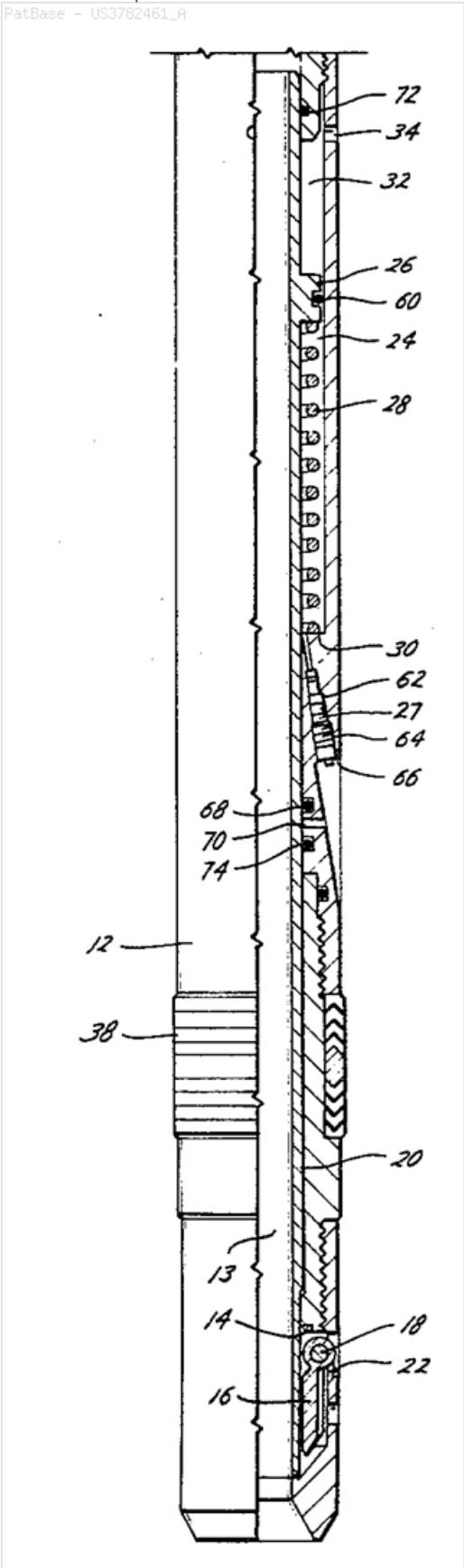
US19700043067 19700603

Probable Assignee: SCHLUMBERGER TECHNOLOGY CORP**Assignee(s):** (std): SCHLUMBERGER TECHNOLOGY CORP**Inventor(s):** (std): YOUNG DAVID E**Inventor(s):** DAVID E YOUNG

Abstract: In a well safety valve for controlling the flow through a well conduit which has a pressurized chamber acting to move the valve toward the closed position and control pressure means extending from the well surface acting to move the valve toward the open position, the improvement of insuring that the control pressure is applied to all of the seals enclosing the pressurized chamber and that the pressure in the well conduit is isolated from the pressurized chamber seals to provide a fail safe valve. Passageway means extending from the control pressure to a position to apply the control pressure against the pressurized chamber seals on a side remote from the pressurized chamber, and seal means between the interior of the well conduit and said control pressure thereby isolating the pressurized chamber from the pressure in the well conduit.

Classifications:

International (IPC 8-9): E21B34/10 (Advanced/Invention);
E21B34/00 (Advanced/Non-invention);
E21B34/00 (Core/Invention)
International (IPC 1-7): E21B23/02 E21B33/03 E21B33/10
E21B43/12 F16K31/12
CPC: E21B34/105 E21B2034/005
European: E21B34/10R P21B34/00F
US: 166/322 166/72



Family:

Publication number	Publication date	Application number	Application date
GB1371216 A	19741023	GB19710051500	19711105
US3782461 A	19740101	US19710148607	19710601

Priority:

US19710148607 19710601

Probable Assignee: CAMCO INT

Assignee(s): (std): CAMCO INC

Assignee(s): CAMCO INC US ; CAMCO INT

Inventor(s): (std): WATKINS F

Inventor(s): WATKINS F US

7) Family number: 1364602 (US3847223A)

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Title: RETRIEVABLE FLUID CONTROL VALVE AND METHOD

Abstract: A normally closed retrievable valve assembly for positioning within a tubing string located in a bore hole. The valve assembly includes a piston, responsive to the pressure of the fluid in the tubing string above the valve assembly, for compressing a spring carried by the valve body a predetermined amount. A valve member is positioned in the valve body and is responsive to the pressure of fluid in the tubing string above the valve assembly to move the valve member from the normally closed position to an open position against the bias of the spring when a predetermined valve-opening pressure is met or exceeded by the fluid in the tubing string. The valve assembly includes means for unseating and retrieving the valve assembly from its operating position within a tubing string. A method of employing the valve assembly in treating an oil well or the like is disclosed.

Classifications:

International (IPC 8-9): E21B23/02 E21B33/12 E21B34/06

E21B43/25 E21B43/27 (Advanced/Invention);

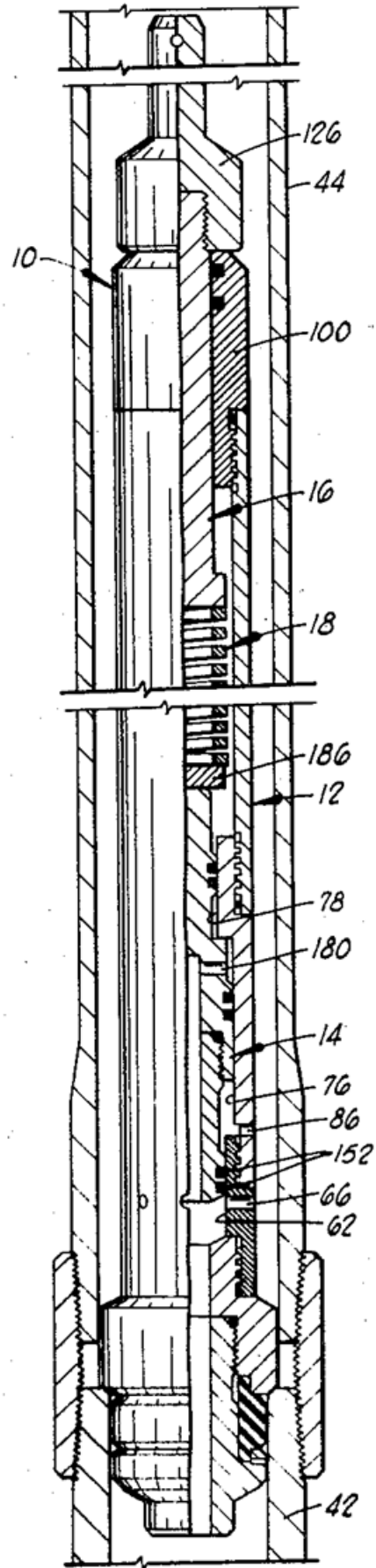
E21B23/00 E21B33/12 E21B34/00 E21B43/25 (Core/Invention)

International (IPC 1-7): E21B43/12 E21B43/25 E21B43/27

CPC: E21B23/02 E21B33/12 E21B34/06 E21B43/25

European: E21B23/02 E21B33/12 E21B34/06 E21B43/25

US: 166/188 166/305.1 166/307 166/322 166/374

**Family:**

Publication number	Publication date	Application number	Application date
CA990644 A1	19760608	CA19730185147	19731106
US3847223 A	19741112	US19730383238	19730727

Priority:

US19720383238 19720727 US19730383238 19730727

Probable Assignee: HALLIBURTON CO**Assignee(s):** (std): HALLIBURTON CO**Assignee(s):** HALLIBURTON CO US ; HALLIBURTON COMPANY ; HYDE WALTER E ; SCOTT THERON A**Inventor(s):** (std): HYDE W ; HYDE WALTER E ; SCOTT T ; SCOTT THERON A**Inventor(s):** SCOTT T US ; HYDE W US**8) Family number: 1332168 (US3986554A)**

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Title: Pressure controlled reversing valve

Abstract: In accordance with an illustrative embodiment of the present invention, a pressure controlled reversing valve includes a housing having a flow passage and ports to communicate the passage with the well annulus outside the housing, valve means for normally closing said ports, valve operator means movable upwardly and downwardly in said housing in response to changes in the pressure of fluids in said annulus, lost-motion coupling means for enabling movement of said operator means independently of said valve means so long as said pressure does not exceed a first predetermined value, and means for converting said lost-motion coupling to a driving connection in response to a second pressure in excess of said first pressure to cause said operator to shift said valve means from closed to open position.

Classifications:**International (IPC 8-9):** E21B34/10 E21B43/00 E21B49/00

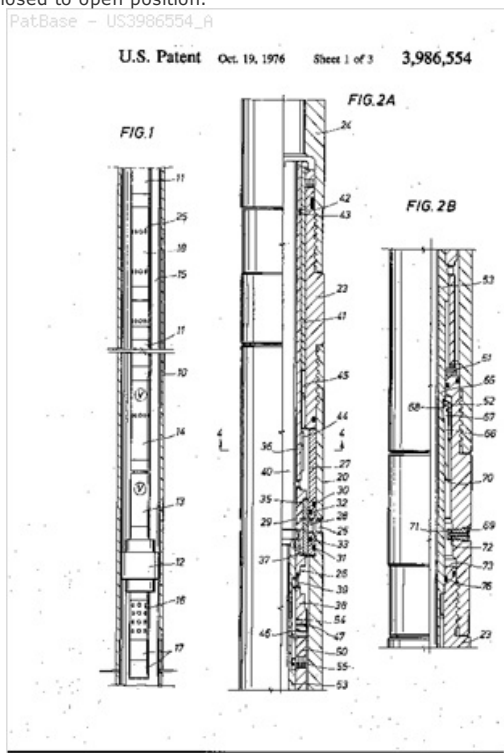
E21B49/08 (Advanced/Invention);

E21B34/00 E21B49/00 (Core/Invention)

International (IPC 1-7): E21B19/00 E21B34/06 E21B35/00

E21B41/00 E21B43/00 E21B43/01 E21B49/00 E21B49/02 E21B7/12

F16K31/12 F16K31/163 F16K31/22

CPC: E21B34/108 E21B49/001 E21B49/087**European:** E21B34/10T E21B49/00A E21B49/08 E21B49/08T**US:** 166/151 166/224A 166/240 166/319 251/63.4**Family:**

Publication number	Publication date	Application number	Application date
AR216439 A1	19791228	AR19760263342	19760520
BR7603097 A	19770201	BR19760003097	19760517
CA1044596 A1	19781219	CA19760253005	19760520
FR2311923 A1	19761217	FR19760015191	19760520
FR2311923 B1	19820910	FR19760015191	19760520
GB1547816 A	19790627	GB19760019064	19760510
NO149515 B	19840123	NO19760001725	19760520
NO149515 C	19840502	NO19760001725	19760520
NO761725 A	19761123	NO19760001725	19760520
US3986554 A	19761019	US19750579333	19750521

Priority:

US19750579333 19750521

Probable Assignee: SCHLUMBERGER TECHNOLOGY CORP**Assignee(s):** (std): SCHLUMBERGER TECHNOLOGY CORP**Assignee(s):** NUTTER BENJAMIN P ; SCHLUMBERGER TECH CORP ; SCHLUMBERGER TECHN CORP**Inventor(s):** (std): NUTTER B P ; NUTTER BENJAMIN P ; NUTTER B**Inventor(s):** BENJAMIN P NUTTER**9) Family number: 1424022 (US4039031A)**

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Title: Well control valve apparatus

Abstract: Well control valve to be installed in a tubing string for use in killing a well through use of fluid under pressure pumped down through the annulus surrounding the tubing string. When the annulus pressure exceeds a predetermined value, the valve is opened to permit the kill fluid to flow into and through the tubing string into the producing formation. The valve

contains a closure member or disc, the upstream side of which is subject to the normal hydrostatic pressure of the fluid in the annulus, and also to an increase in the pressure of the annulus fluid above normal hydrostatic pressure, but its downstream side is subjected to atmospheric pressure initially. Accordingly, the closure member can be placed in its opened condition, as by rupturing it, when subjected to a predetermined increase in annulus pressure above the normal hydrostatic pressure, allowing the annulus kill fluid to flow into and through the tubing string to the producing formation.

Classifications:

International (IPC 8-9): E21B34/06 E21B34/08 E21B34/12

E21B43/12 F16K17/14 (Advanced/Invention);

E21B34/00 F16K17/02 (Core/Invention)

International (IPC 1-7): E21B33/10 E21B33/12 E21B34/06

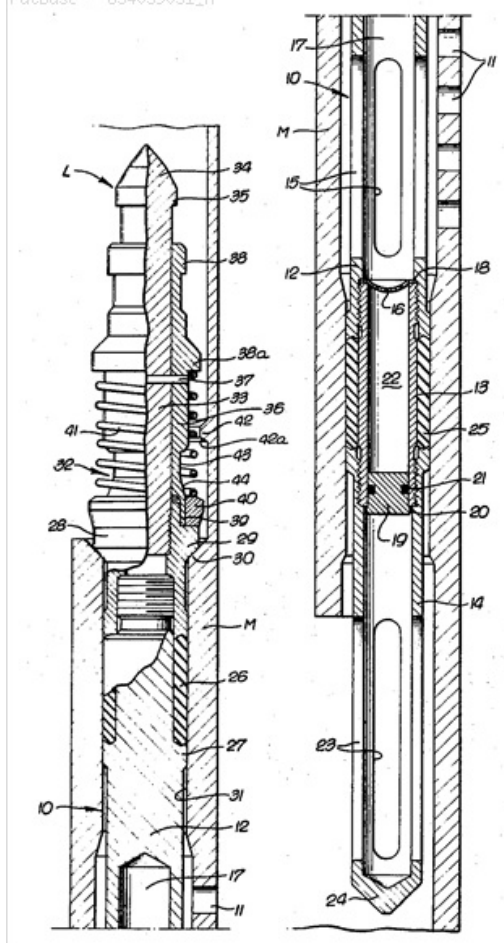
E21B41/00 E21B43/00 E21B43/12 F16K17/02 F16K17/14 F16K17/40

CPC: Y10T137/1707 Y10T137/1714 E21B34/063

European: E21B34/06B

US: 137/68.22 137/68.23 166/317 166/321 166/325

PatBase - US4039031_A



Family:

Publication number	Publication date	Application number	Application date
CA1043696 A1	19781205	CA19760268840	19761229
DE2702662 A1	19770728	DE19772702662	19770124
DE2702662 B2	19800430	DE19772702662	19770124
DE2702662 C3	19801218	DE19772702662	19770124
FR2339118 A1	19770819	FR19770000031	19770103
GB1540629 A	19790214	GB19760054488	19761231
JP1177223 C3	19831114	JP19760135469	19761112
JP52091701 A2	19770802	JP19760135469	19761112
JP58005358 B4	19830131	JP19760135469	19761112
MX144578 A	19811028	MX19760167156	19761124
NL7614459 A	19770728	NL19760014459	19761228
NO763892 A	19770727	NO19760003892	19761115
US4039031 A	19770802	US19760652483	19760126
US4059157 A	19771122	US19760716431	19760823

Priority:

US19760652483 19760126 US19760716431 19760823

Probable Assignee: BAKER INT CORP

Assignee(s): (std): BAKER INT CORP ; BAKER OIL TOOLS INC

Assignee(s): CROWE TALMADGE L ; BAKER INT CORP ORANGE CALIF V ST A ; BAKER INT TE ORANGE CALIFORNIE VER ST V AM CORP

Inventor(s): (std): TARUMATSUJI ERU KUROU ; CROWE TALMADGE L

Inventor(s): TARUMATSUJI ERU KURO

10) Family number: 1370507 (US4109725A)

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Title: SELF ADJUSTING LIQUID SPRING OPERATING APPARATUS AND METHOD FOR USE IN AN OIL WELL VALVE

Abstract: Disclosed is an apparatus and its method of operation for an oil well valve having a self adjusting liquid spring responsive to changes in pressure in the well annulus. The valve has a liquid spring contained in a spring chamber divided by a piston means which moves responsive to annulus pressure changes to operate the valve. The piston means includes a metering means to meter liquid from one side of the piston to the other as the volume of the liquid changes due to pressure and temperature changes. The piston means moves responsive to pressure changes in the well annulus which pressure changes are applied to the well annulus at a rate faster than the metering means may relieve the changes. A mechanical spring means in conjunction with the metering means returns the piston means to its original position after a predetermined

time. Bypass means is additionally disclosed which bypasses the metering means and may be arranged such that piston means movement occurs on either pressure increases or pressure decreases in the well annulus.

Classifications:

International (IPC 8-9): E21B34/10 E21B43/12

E21B49/00 (Advanced/Invention);

E21B34/00 E21B49/00 (Core/Invention)

International (IPC 1-7): E21B25/00 E21B33/035 E21B33/12

E21B34/06 E21B34/10 E21B43/01 E21B43/12 E21B47/00 E21B49/00

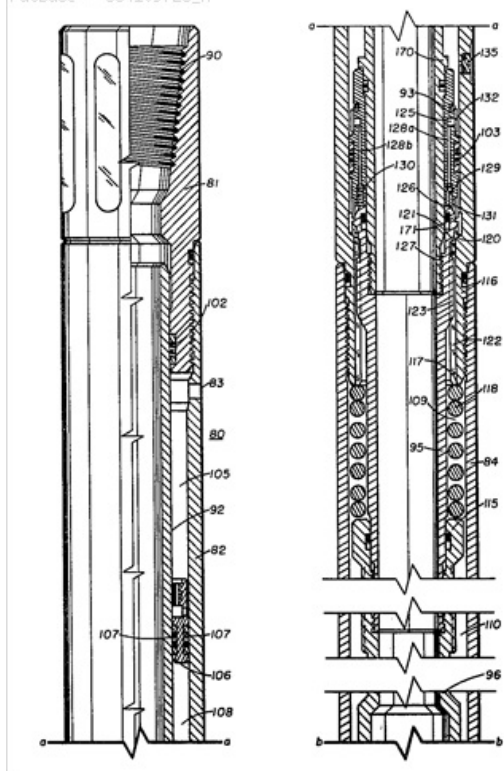
E21B49/08 F16K1/00 F16K31/122

CPC: Y10S137/906 E21B49/001 E21B34/108

European: E21B34/10T E21B49/00A

US: 137/906 166/315 166/321 166/373 251/62

PatBase - US4109725_A



Family:

Publication number	Publication date	Application number	Application date
AU197841023 A1	19800501	AU19780041023	19781025
AU523169 B2	19820715	AU19780041023	19781025
BR7806405 A	19790703	BR19780006405	19780927
CA1094948 A1	19810203	CA19780313292	19781004
DE2845710 A1	19790503	DE19782845710	19781020
DE2845710 C2	19860626	DE19782845710	19781020
DK476778 A	19790428	DK19780004767	19781026
ES474391 A1	19800116	ES19780474391	19781020
ES480162 A1	19800116	ES19790480162	19790502
GB2006854 A1	19790510	GB19780036483	19780912
GB2006854 B2	19820224	GB19780036483	19780912
IT1100316 A	19850928	IT19780028798	19781016
IT7828798 A0	19781016	IT19780028798	19781016
JP54145302 A2	19791113	JP19780129434	19781020
JP57034438 B4	19820722	JP19780129434	19781020
MX147167 A	19821019	MX19780175195	19781011
NL188706 B	19920401	NL19780010134	19781009
NL188706 C	19920901	NL19780010134	19781009
NL7810134 A	19790502	NL19780010134	19781009
NO156181 B	19870427	NO19780003620	19781026
NO156181 C	19870805	NO19780003620	19781026
NO783620 A	19790730	NO19780003620	19781026
US4109725 A	19780829	US19770846076	19771027

Priority:

US19770846076 19771027 CA19780313292 19781004

Probable Assignee: HALLIBURTON CO

Assignee(s): (std): HALLIBURTON CO

Assignee(s): HALLIBURTON CO DUNCAN OKLA US ; HALLIBURTON CO TE DUNCAN OKLAHOMA VER ST V AM ; HALLIBURTON COMPANY ; HALLIBURTON COMPANY TE DUNCAN OKLAHOMA VER ST V AM ; WILLIAMSON JIM R ; GONZALEZ FLOYD A

Inventor(s): (std): GONZALES FLOYD ANTHONY ; GONZALEZ F ; GONZALEZ F A ; GONZALEZ FLOYD ANTHONY ; JIMU ROBAATO UIRIAMUSON ; WILLIAMSON JIM ROBERT ; WILLIAMSON J ; WILLIAMSON J R ; WILLIAMSON JIM ROBERT ; WILLIAMSON JIM R ; GONZALEZ FLOYD A

Inventor(s): ANTHONY GONZALEZ FLOYD ; ROBERT WILLIAMSON JIM ; GONZALEZ FLOYD ANTHONY DUNCAN OKLA US ; FLOYD ANTHONY GONZALEZ ; WILLIAMSON JIM ROBERT CARROLLTON TEX ; WILLIAMSON JIM ROBERT CARROLLTON TEX US ; GONZALEZ FLOYD ANTHONY DUNCAN OKLA ; JIM ROBERT WILLIAMSON ; JIM ROBERT WILLIAMSON AND FLOYD ANTHONY GONZALEZ

Agent(s): LM; SWABEY OGILVY RENAULT

Abstract: In a well safety valve for controlling the fluid flow through a well conduit in which the valve has a housing and a valve element movable in the housing between an open and closed position for controlling the flow through a passageway in the housing and means for biasing the valve element to a closed position, the improvement in piston means for moving the valve element into an open position. A piston is telescopically mounted in the housing, is controlled by fluid from the well surface, and is offset from the passageway. The piston has a small cross-sectional area for reducing the effect of hydrostatic forces acting on the piston whereby the valve may be used at greater depths in the well. The piston has a diameter smaller than the diameter of the valve passageway for ease of manufacture and less expense. Preferably the piston is positioned within the wall of the housing, and may be a solid cylinder or may be tubular one outside diameter with a second lower section of a greater outside diameter. Preferably, the piston is attached to and actuates a tubular member which controls the movement of the valve closure member and has a cross-sectional area less than the cross-sectional area of the tubular member.

Classifications:

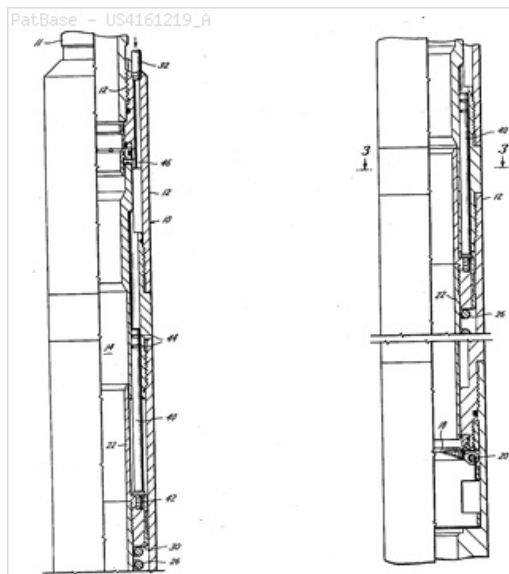
International (IPC 8-9): E21B34/10 (Advanced/Invention);
E21B34/00 (Advanced/Non-Invention);
E21B34/00 (Core/Invention)

International (IPC 1-7): E21B34/10 E21B43/12

CPC: E21B34/105 E21B2034/005 E21B34/10

European: E21B34/10 E21B34/10R P21B34/00F

US: 166/322 166/324 166/72 251/62



Family:

Publication number	Publication date	Application number	Application date
GB2018332 A1	19791017	GB19790006820	19790226
GB2018332 B2	19820331	GB19790006820	19790226
GB2047304 A1	19801126	GB19790040663	19791123
GB2047304 B2	19830126	GB19790040663	19791123
US4161219 A	19790717	US19780881484	19780227
US4161219 B1	19840228	US19780881484	19780227
US4252197 A	19810224	US19790027207	19790405

Priority:

US19780881484 19780227 US19790027207 19790405

Probable Assignee: CAMCO INT

Assignee(s): (std): CAMCO INC

Assignee(s): CAMCO INT

Inventor(s): (std): PRINGLE RONALD E ; RONALD E PRINGLE

12) Family number: 1393749 (US4280561A)

© PatBase

Title: Valve

Abstract: A sleeve valve which may be made up as a part of a tubing string in which the valve member has two positions. Dogs carried by the valve member alternately cooperate with spaced grooves in the body in said positions. The dogs are alternately engageable by a shifting tool to shift the valve member in opposite directions and after the valve member has been shifted, the dogs are disengaged from the shifting tool. The valve is disclosed as a part of a testing system employing a circulating tool, a cushion valve, a seal unit, and a landing nipple with a transducer fitting.

Classifications:

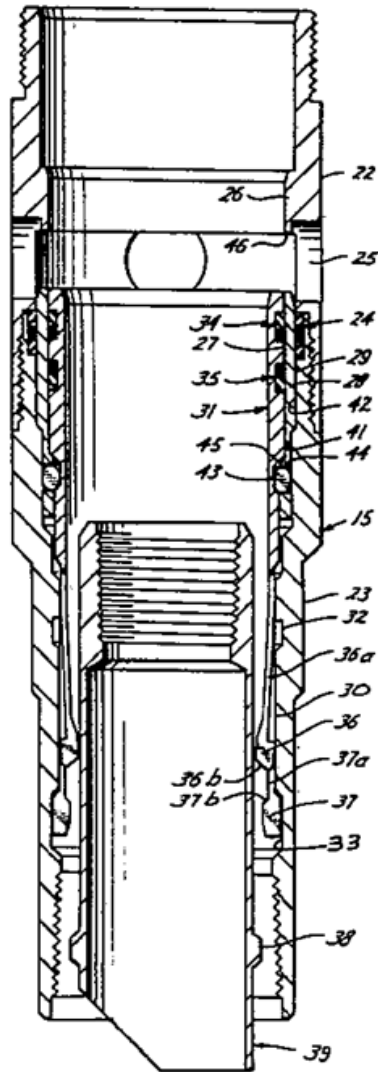
International (IPC 8-9): E21B34/06 E21B34/14 (Advanced/Invention);
E21B34/00 (Core/Invention)

International (IPC 1-7): E21B34/06 E21B34/12 E21B34/14
E21B43/12 F16K31/46 F16K31/48

CPC: E21B34/14

European: E21B34/14

US: 166/316 166/332 166/332.4 251/297 251/319

**Family:**

Publication number	Publication date	Application number	Application date
AU198059617 A1	19810115	AU19800059617	19800625
AU532509 B2	19831006	AU19800059617	19800625
CA1133826 A1	19821019	CA19800350943	19800430
DK284580 A	19810103	DK19800002845	19800701
EP0023765 A1	19810211	EP19800302203	19800701
EP0023765 B1	19831116	EP19800302203	19800701
NO801976 A	19810105	NO19800001976	19800701
US4280561 A	19810728	US19790053782	19790702

Priority:

US19790053782 19790702 CA19800350943 19800430

Probable Assignee: HALLIBURTON CO

Assignee(s): (std): OTIS ENG CO

Assignee(s): OTIS ENGINEERING CORP ; FREDD JOHN V ; HALLIBURTON CO

Inventor(s): (std): FREDD J V ; FREDD JOHN V ; FREDD JOHN VICTOR

Inventor(s): JOHN V FREDD ; J V FREDD

Agent(s): PHILLIPS ORMONDE FITZPATRICK; SMART AND BIGGAR

Designated states: FR GB NL

13) Family number: 8654396 (US4361188A)

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Title: Well apparatus actuating means having pressure accumulator means and method of use

Abstract: Well apparatus, in which a pressured fluid accumulator is used to perform a function when the apparatus is disposed downhole in a well, such as to operate a valve to control fluid flow through a tubing string in which the apparatus is disposed. The accumulator is pressure-charged after the apparatus is run into the well by exposing the accumulator to casing pressure, so that the accumulator will thereafter be at a constant pressure. Performance of functions is accomplished by varying the casing pressure to above or below accumulator pressure, and using the pressure differential between the casing and accumulator to operate an actuator, such as a piston, to perform the function. The accumulator pressure may be made as desired by adjustment of the casing pressure at the time the accumulator is charged with pressure after the apparatus has been run into the well.

Classifications:**International (IPC 8-9):** E21B34/10 E21B34/16

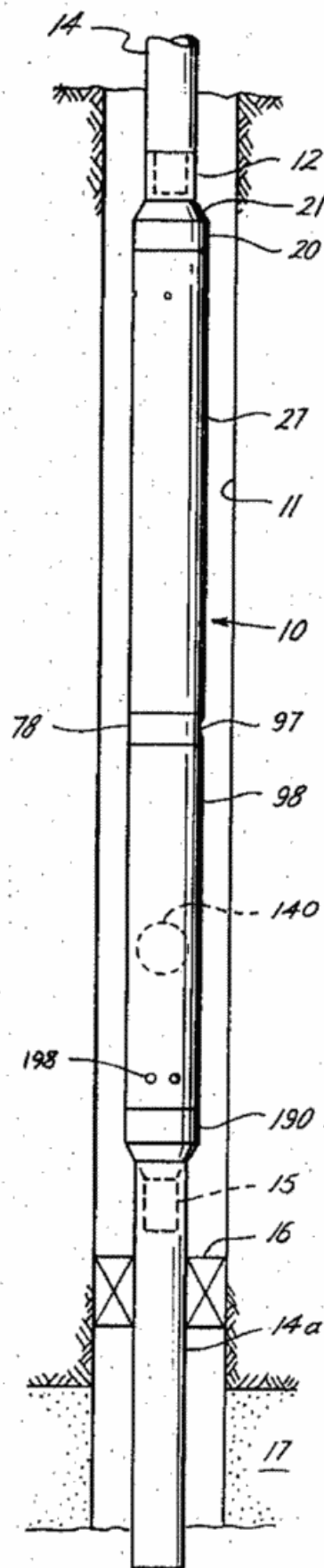
E21B41/00 (Advanced/Invention);

E21B34/00 (Advanced/Non-invention);

E21B34/00 E21B41/00 (Core/Invention)

International (IPC 1-7): E21B34/10 E21B43/12**CPC:** E21B34/102 E21B34/16 E21B41/00 E21B2034/002**European:** E21B34/10L E21B34/16 E21B41/00 P21B34/00B**US:** 166/319 166/321 166/323 166/374 166/381 166/387

PatBase - US4361188_A

**Family:**

Publication number	Publication date	Application number	Application date
US4361188 A	19821130	US19800137714	19800407

Priority:

US19800137714 19800407

Probable Assignee:

RUSSELL LARRY R

Assignee(s): (std):

RUSSELL LARRY R

14) Family number: 2412730 (US4428428A)

© PatBase

Title: Tool and method for gravel packing a well

Abstract: A gravel packing tool includes a differential piston sleeve normally covering an auxiliary return port through the wash pipe located above an annular seal of a sand screen liner. The seal engages the wash pipe sealing against pressure communication between upper and lower sand screen sections in the liner. A shear pin connecting between the sleeve and the wash pipe holds the sleeve in its port closing position until the pressure differential between the inside and outside of the wash pipe causes the sleeve to shift into a second position breaking the pin and exposing the port to establish an auxiliary path for liquid to return through the wash pipe. A spring acting between the sleeve and the wash pipe urges the sleeve back into its closing position when the pressures inside and outside the wash pipe begin to equalize.

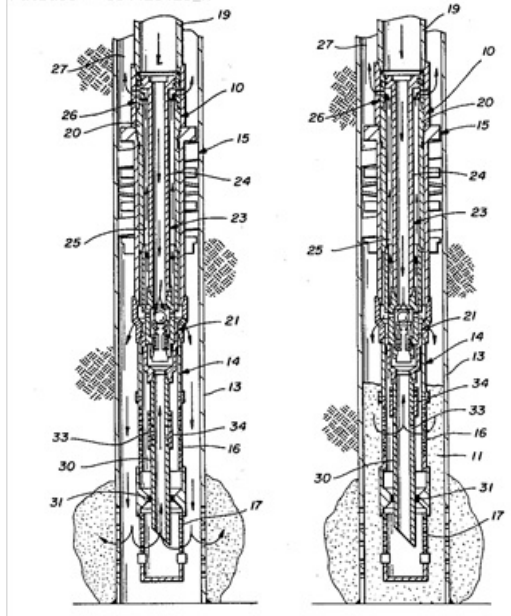
Classifications:**International (IPC 8-9):** E21B34/06 E21B34/10

E21B43/04 (Advanced/Invention);

E21B34/00 E21B43/02 (Core/Invention)

International (IPC 1-7): E21B34/08 E21B43/04**CPC:** E21B34/063 E21B34/103 E21B43/045**European:** E21B34/06B E21B34/10L2 E21B43/04 E21B43/04C**US:** 166/278 166/317 166/319 166/51

PatBase - US4428428_A

**Family:**

Publication number	Publication date	Application number	Application date
CA1191448 A1	19850806	CA19820416025	19821119
US4428428 A	19840131	US19810333511	19811222

Priority:

US19810333511 19811222 CA19820416025 19821119

Probable Assignee: DRESSER IND**Assignee(s):** (std): DRESSER IND**Assignee(s):** DRESSER IND INC ; DRESSER INDUSTRIES INC ; REDD BOBBY G ; SMYRL KENNETH E**Inventor(s):** (std): REDD BOBBY G ; SMYRL KENNETH E**Agent(s):** MACRAE AND CO**15) Family number: 6186363** (FR2640945A)

© PatBase

Title: Valve-fastening piece, particularly for underground cavity shafts serving for storing pressurised gas

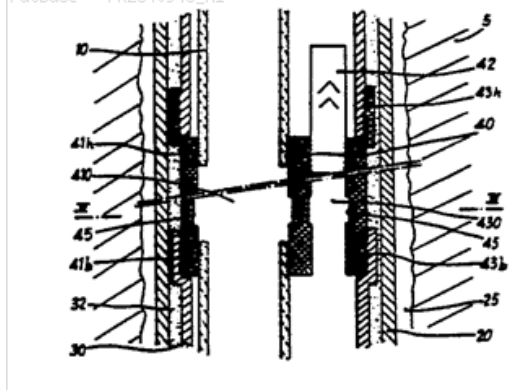
Abstract: In particular, inside underground cavity shafts serving for storing pressurised gas, when these include an operating pipe 10, a piece 40 is arranged which enables a valve 42 to be secured in the annular space between the operating pipe 10 and the protective tube 30 lining the shaft. The present valve-fastening piece 40 is characterised in that it forms an integral part of the various pipes (tubes) 10, 30 arranged in the shaft. It thus avoids any risk of detachment of the valve 42 through the effect of the pressure of the gas stored. Moreover, it does not unduly reduce the cross section of the operating pipe 10. This piece 40 is also of interest for contributing to the safety system of the storage area.

Classifications:**International (IPC 8-9):** B65G5/00 (Advanced/Invention);

B65G5/00 (Core/Invention)

International (IPC 1-7): B65G5/00 E21B33/12**CPC:** B65G5/00**European:** B65G5/00

PatBase - FR2640945_A1



Family:

Publication number	Publication date	Application number	Application date
FR2640945 A1	19900629	FR19880017116	19881223
FR2640945 B1	19910419	FR19880017116	19881223

Priority:

FR19880017116 19881223

Probable Assignee:

GEOSTOCK

Assignee(s): (std):

GEOSTOCK

16) Family number: 3154124 (US5193619A)

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Title: WELL CONTROL APPARATUS

Abstract: PCT No. PCT/GB90/00606 Sec. 371 Date Oct. 8, 1991 Sec. 102(e) Date Oct. 8, 1991 PCT Filed Apr. 20, 1990 PCT Pub. No. WO90/13731 PCT Pub. Date Nov. 15, 1990. Apparatus for the venting and isolation of an oil well test tool drill string comprises reference pressure gas release apparatus having two spaced pistons (7, 11) located at opposite ends of the reference gas chamber (10) and blocking both a gas vent (17) to annulus and a hydraulic liquid passageway (22) extending further up the test string, the pistons being held together by a shear pin (13) until the application of a predetermined higher pressure across those pistons causes the pin to shear, allowing sequential movement of the two pistons toward each other, firstly opening the gas vent to annulus, and secondly opening the passageway (22) to a chamber (24) of hydraulic liquid. The hydraulic liquid pressure within this passageway then causes actuation of ball valve apparatus for isolating the upper section of tubing, which in turn enables transfer of hydraulic pressure to apparatus for venting the contents of the tubing to annulus.

Classifications:**International (IPC 8-9):** E21B34/06 E21B34/10

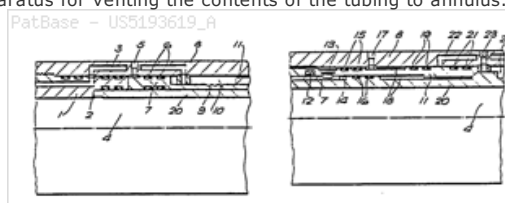
E21B49/08 (Advanced/Invention);

E21B34/00 E21B49/00 (Core/Invention);

E21B (Subclass/Invention)

International (IPC 1-7): E21B34/06 E21B34/08 E21B34/10

E21B47/06 E21B49/08

CPC: E21B34/103**European:** E21B34/10L2**US:** 166/321 166/323**Family:**

Publication number	Publication date	Application number	Application date
CA2053245 AA	19901029	CA19902053245	19900420
CA2053245 C	19981229	CA19902053245	19900420
DK0470160 T3	19941107	DK19900907239T	19900420
EP0470160 A1	19920212	EP19900907239	19900420
EP0470160 B1	19940706	EP19900907239	19900420
GB2230802 A1	19901031	GB19900006586	19900323
GB2230802 B2	19920923	GB19900006586	19900323
GB8909892 A0	19890614	GB19890009892	19890428
GB9006586 A0	19900523	GB19900006586	19900323
NO302253 B1	19980209	NO19910004200	19911025
NO914200 A	19911202	NO19910004200	19911025
NO914200 A0	19911025	NO19910004200	19911025
US5193619 A	19930316	US19910768856	19911008
WO9013731 A2	19901115	WO1990GB00606	19900420
WO9013731 A3	19901213	WO1990GB00606	19900420

Priority:

GB19890009892 19890428

GB19900006586 19900323

WO1990GB00606 19900420

Probable Assignee: EXPLORATION AND PROD SERV**Assignee(s): (std):** EXPLORATION AND PRODUCTION SER ; EXPRO NORTH SEA LTD ; EXPLORATION AND PROD SERV**Assignee(s):** EXPLORATION AND PROD SERVICE LTD ; EXPRO NORTH SEA LIMITED ; EXPLORATION AND PRODUCTION SERVICES NORTH SEA LTD ; EXPLORATION AND PRODUCTION SERVICES NORTH SEA LIMITED ; EXPLORATION AND PRODUCTION SERVICES ; EXPLORATION AND PRODUCTION SERVICES (NORTH... ; EXPLORATION AND PRODUCTION SERVICES LTD ; EXPLORATION AND PRODUCTION SERVICES NORTH SEA LI**Inventor(s): (std):** BUCHANAN ROBERT DONALD ; EDWARDS JEFFREY CHARLES ; JOHNS RAY ; EDWARDS JEFFREY C ; BUCHANAN ROBERT D**Inventor(s):** RAY JOHNS ; ROBERT DONALD BUCHANAN ; JEFFREY CHARLES EDWARDS**Designated states:** AT BE CA CH DE DK ES FR GB IT LU NL NO SE US**17) Family number: 3507066 (US5207275A)**

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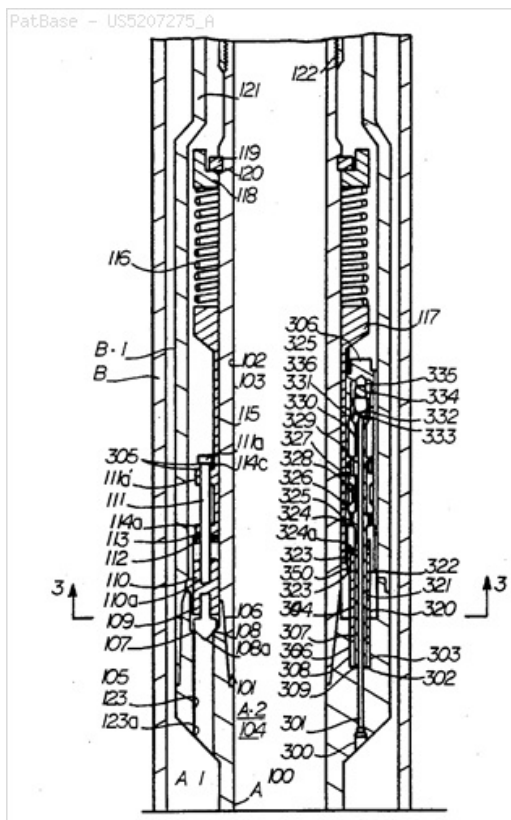
Title: ANNULUS SAFETY VALVE

Abstract: The present invention relates to a subterranean well annulus pressure safety valve. In one embodiment, the valve is full opening to permit complete access therethrough of wireline and other remedial tools, and contains the annulus safety valve members completely offset from the central housing. The invention also relates to an annulus safety valve wherein a series of valve elements are placed exterior of a central housing and may be staged to open in series upon incremental increase of pressure thereacross. The annulus safety valve also provides pressure equalization means to equalize pressure across the valve cluster prior to opening of the cluster. The annulus safety valve also has selectively disengagable sealing plug means therein which may be removed while the valve is in the well to increase total fluid flow area through the valve components of the apparatus. A method of controlling an annular area interior of casing within a well using the annulus safety valve also is disclosed.

Classifications:**International (IPC 8-9):** E21B34/10 (Advanced/Invention);

E21B34/00 (Core/Invention)

International (IPC 1-7): E21B33/06 E21B34/06 E21B34/08
E21B34/10 E21B43/00
CPC: E21B34/10
European: E21B34/10
US: 166/129 166/321 166/324 166/374 166/386



Family:

Publication number	Publication date	Application number	Application date
AU199182794 A1	19920305	AU19910082794	19910827
DK151291 A	19920228	DK19910001512	19910827
DK151291 A0	19910827	DK19910001512	19910827
FR2666116 A1	19920228	FR19910010647	19910827
GB2248256 A1	19920401	GB19910018326	19910827
GB2248256 B2	19940928	GB19910018326	19910827
GB9118326 A0	19911009	GB19910018326	19910827
NL9101447 A	19920316	NL19910001447	19910827
NO303240 B1	19980615	NO19910003337	19910826
NO913337 A	19920228	NO19910003337	19910826
NO913337 A0	19910826	NO19910003337	19910826
US5207275 A	19930504	US19900573528	19900827
US5211243 A	19930518	US19910750523	19910827

Priority:

US19900573528 19900827 US19910750523 19910827

Probable Assignee: BAKER HUGHES INC

Assignee(s): (std): BAKER HUGHES INC ; DEATON THOMAS M ; STRATTAN SCOTT C

Assignee(s): BAKER HUGHES INC TE HOUSTON TEXAS VER ST V AM

Inventor(s): (std): CLAYTON STRATTAN SCOTT ; DEATON THOMAS M ; MICHAEL DEATON THOMAS ; STRATTAN SCOTT C ; STRATTAN SCOTT CLAYTON ; DEATON THOMAS MICHAEL

Inventor(s): THOMAS M DEATON ; SCOTT CLAYTON STRATTAN ; THOMAS MICHAEL DEATON

Agent(s): FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; FPA PATENT ATTORNEYS PTY LTD

18) Family number: 29457683 (US6230807B)

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Title: Valve operating mechanism

Abstract: Apparatus and method for operating a valve positioned in a wellbore. The apparatus includes a tubing having a bore and a piston operably coupled to the valve. The piston is moveable from a first position to the second position by predetermined pressure applied from fluid in the tubing bore. A counter mechanism coupled to the piston prevents movement of the piston to the second position until the predetermined pressure has been applied a first number of times.

Classifications:

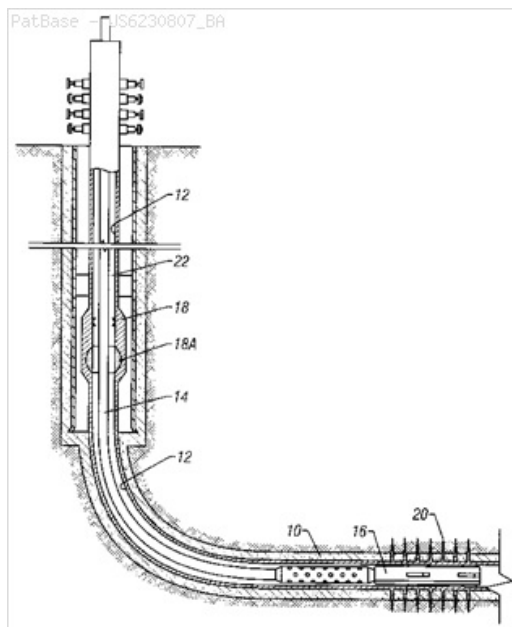
International (IPC 8-9): E21B23/00 E21B34/00 E21B34/10
E21B34/14 F16K31/00 (Advanced/Invention);
E21B34/00 (Advanced/Non-invention)

International (IPC 1-7): E21B21/10 E21B23/00 E21B31/14
E21B34/06 E21B34/10 E21B34/14 E21B43/12 F16K31/00

CPC: E21B23/006 E21B34/10 E21B34/101 E21B34/103 E21B34/14
E21B2034/002

European: E21B23/00M E21B23/00M2 E21B34/10 E21B34/10E
E21B34/10L2 E21B34/14 P21B34/00B

US: 166/240 166/321 166/331



Family:

Publication number	Publication date	Application number	Application date
AU199859386 A1	19980924	AU19980059386	19980319
AU737708 B2	20010830	AU19980059386	19980319
BRPI9803640 A	19991207	BR1998PI03640	19980319
CO4780054 A1	19990526	CO19980015537	19980319
DK38498 A	19980920	DK19980000384	19980319
GB2323399 A1	19980923	GB19980005928	19980319
GB2323399 B2	20000517	GB19980005928	19980319
GB2339226 A1	20000119	GB19990022252	19980319
GB2339226 B2	20000719	GB19990022252	19980319
GB9805928 A0	19980513	GB19980005928	19980319
GB9922252 A0	19991117	GB19990022252	19980319
ID20068 A	19980924	ID19980000397	19980319
MY120030 A	20050830	MY19980001196	19980319
NO314774 B1	20030519	NO19980001214	19980318
NO981214 A	19980921	NO19980001214	19980318
NO981214 A0	19980318	NO19980001214	19980318
US6230807 BA	20010515	US19980042926	19980317

Priority:

US19970041108P 19970319 US19980042926 19980317 GB19980005928 19980319

Probable Assignee: SCHLUMBERGER TECHNOLOGY CORP

Assignee(s): (std): PETROLEUM RES AND DEV N V ; PETROLEUM RES AND DEV NV ; SCHLUMBERGER HOLDINGS ; SCHLUMBERGER TECHNOLOGY BV ; SCHLUMBERGER LTD ; SCHLUMBERGER TECHNOLOGY CORP ; SCHLUMBERGER SURENCO SA

Assignee(s): SCHLUMBERGER SURENCO S A ; SCHLUMBERGER TECHNOLOGY B V ; SCHLUMBERGER HOLDINGS LIMITED ; SCHLUMBERGER HOLDINGS LTD ; SCHLUMBERGER LIMITED ; PETROLEUM RESEARCH AND DEVELOPMENT N V ; PETROLEUM RESEARCH AND DEVELOPMENT NV

Inventor(s): (std): PATEL DINESH R ; DINESH R PATEL

Inventor(s): R PATEL DINESH

Agent(s): GRIFFITH HACK ; GERMAN CASTILLO GRAU

19) Family number: 13384194 (US6293342B)

© PatBase

Title: Bypass valve closing means

Abstract: This invention relates particularly but not exclusively to the secondary means for closing a bypass valve. A bypass valve (102) is provided which comprises a body (4) having a bore extending therethrough; at least one aperture (32) adapted to allow fluid communication between the bore and a chamber defined in the body (4); and at least one aperture adapted to allow fluid communication between the chamber and the exterior of the bypass valve. Fluid communication between the chamber and the bypass valve exterior is permitted when a piston (78) located in the chamber is in a first position, but is not permitted when the piston (78) is in a second position. Mechanism for selectively exposing the piston (78) to a pressure differential which moves the piston (78) is provided. A bypass valve is hereby provided which is more reliable than conventional bypass valve equipment.

Classifications:

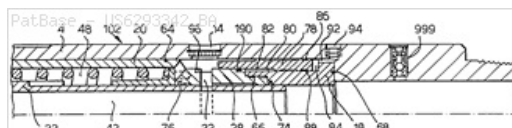
International (IPC 8-9): E21B21/10 E21B34/06
E21B34/10 (Advanced/Invention);
E21B21/00 E21B34/00 (Core/Invention)

International (IPC 1-7): E21B E21B21/10 E21B34/10

CPC: E21B21/10 E21B21/103 E21B34/063 E21B34/102 E21B34/103

European: E21B21/10 E21B21/10C E21B34/06B E21B34/10L
E21B34/10L2

US: 166/317 166/319 166/323



Family:

Publication number	Publication date	Application number	Application date
CA2295592 AA	20000107	CA19982295592	19980728
CA2295592 C	20060131	CA19982295592	19980728
EP1000220 A1	20000517	EP19980936516	19980728
EP1000220 B1	20020410	EP19980936516	19980728
GB200110032 A0	20010613	GB20010010032	19970729
GB2327691 A1	19990203	GB19970016011	19970729
GB2327691 B2	20010627	GB19970016011	19970729
GB2358657 A1	20010801	GB20010010032	19970729
GB2358657 B2	20011003	GB20010010032	19970729
GB9715930 A0	19971001	GB19970015930	19970728
GB9716011 A0	19971001	GB19970016011	19970729
NO20000420 A	20000127	NO20000000420	20000127
NO20000420 A0	20000127	NO20000000420	20000127
NO318067 B1	20050131	NO20000000420	20000127
US6293342 BA	20010925	US20000463460	20000127
WO9905393 A1	19990204	WO1998GB02244	19980728

Priority:

GB19970015930 19970728 GB19970016011 19970729 WO1998GB02244 19980728

Probable Assignee: SMITH INT INC

Assignee(s): (std): MCGARIAN BRUCE ; SMITH INT ; SMITH INT INC ; TULLOCH RORY MCCRAE

Inventor(s): (std): MCGARIAN BRUCE HERMANN FORSYTH ; TULLOCH RORY MCRAE ; TULLOCH RORY MCCRAE ; MCGARIAN BRUCE

Inventor(s): RORY MCCRAE TULLOCH ; BRUCE HERMANN FORSYTH MCGARIAN ; BRUCE MCGARIAN

Agent(s): BERESKIN AND PARR LLP SENCRL SRL

Designated states: AT BE CA CH CY DE DK ES FI FR GB GR IE IT LU MC NL NO PT SE US

20) Family number: 31777864 (US2007001134A)

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Title: SLURRY TOLERANT PILOT OPERATED RELIEF VALVE

Abstract: Cartridge-style fluid control devices are provided that are static pressure independent and capable of repeatable, reliable, particulate insensitive performance in service conditions typical of downhole intervention environments.

Classifications:

International (ipc 8-9): F16K31/00 F16K31/122 F16K31/143

F16K31/163 F16K31/363 F16K31/383 G05D16/10

G05D7/01 (Advanced/Invention)

International (ipc 1-7): F16K31/143 F16K31/163 F16K31/383

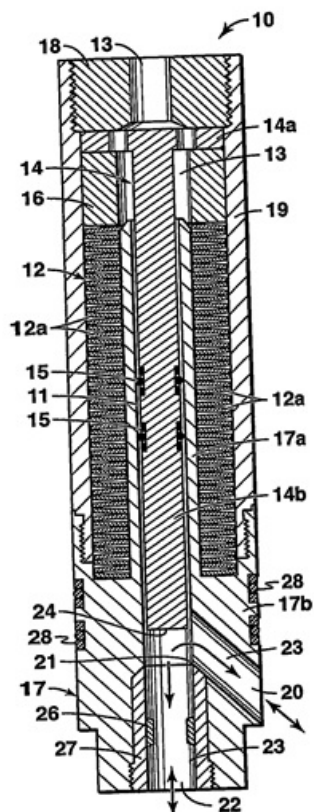
CPC: G05D16/18 E21B21/10 F16K17/082 F16K31/1221 F16K31/363

European: E21B21/10 F16K17/08B F16K31/122B F16K31/363

G05D16/10B G05D7/01C2

US: 251/62 251/63 251/63.5 251/63P

PatBase - US2007001134_AA



Family:

Publication number	Publication date	Application number	Application date
US2007001134 AA	20070104	US20040569560	20040914
US7467778 BB	20081223	US20040569560	20040914
WO05028934 A1	20050331	WO2004US29831	20040914

Priority:

US20030503042P 20030915 US20040569560 20040914 WO2004US29831 20040914

Probable Assignee: EXXON MOBIL CORP**Assignee(s):** (std): EXXONMOBIL UPSTREAM RES CO ; LONNES STEVEN B**Assignee(s):** EXXON MOBIL CORP ; EXXONMOBIL UPSTREAM RESEARCH CO ; EXXONMOBIL UPSTREAM RESEARCH CO COPR URC ; EXXONMOBIL UPSTREAM RESEARCH CO COPR URC SW348 ; EXXONMOBIL UPSTREAM RESEARCH COMPANY ; EXXONMOBIL UPSTREAM RESEARCH COMPANY COPR URC**Inventor(s):** (std): LONNES STEVEN B**Inventor(s):** LONNES STEVEN**Agent(s):** BRENT R KNIGHT EXXONMOBIL UPSTREAM RESEARCH CO**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**21) Family number: 33079903** (US2006131033A)

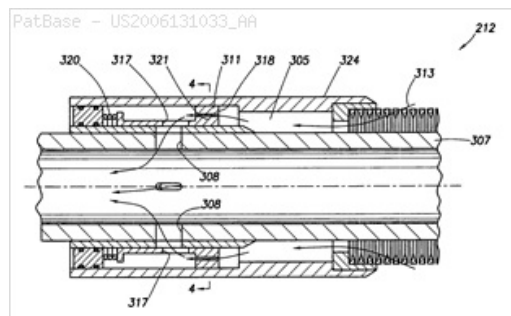
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Title: FLOW CONTROL APPARATUS FOR USE IN A WELLBORE**Abstract:** Methods and apparatus for use in a wellbore to meter and choke certain components from being produced, based upon their density relative to the density of oil are disclosed. The device includes an inner tubular body portion having apertures in the wall thereof for passing oil, an outer tubular body and at least one metering orifice therebetween to meter production. Disposed around the inner body is an axially movable member to selectively cover and expose the apertures of the inner body, thereby permitting fluid to flow therethrough.**Classifications:****International (IPC 8-9):** E21B34/06 E21B34/08 E21B43/08

E21B43/12 (Advanced/Invention);

E21B34/00 E21B43/02 E21B43/12 (Core/Invention);

E21B (Subclass/Invention)

CPC: E21B34/08 E21B43/08 E21B43/12**European:** E21B34/08 E21B43/08 E21B43/12**US:** 166/319 166/334.1 166/369 166/386 166/53**Family:**

Publication number	Publication date	Application number	Application date
AU2005242132 AA	20060706	AU20050242132	20051207
AU2005242132 BB	20110324	AU20050242132	20051207
CA2528722 AA	20060616	CA20052528722	20051202
CA2528722 C	20090203	CA20052528722	20051202
EP1672167 A1	20060621	EP20050112026	20051213
EP1672167 B1	20080213	EP20050112026	20051213
EP1857633 A2	20071121	EP20070115567	20051213
EP1857633 A3	20090624	EP20070115567	20051213
EP1857633 B1	20110126	EP20070115567	20051213
NO20055816 A	20060619	NO20050005816	20051208
NO20055816 A0	20051208	NO20050005816	20051208
NO335210 B1	20141020	NO20050005816	20051208
US2006131033 AA	20060622	US20040013863	20041216
US7296633 BB	20071120	US20040013863	20041216

Priority:

US20040013863 20041216 CA20052528722 20051202 EP20050112026 20051213

Probable Assignee: WEATHERFORD TECHNOLOGY HOLDINGS LLC**Assignee(s):** (std): BODE JEFFREY ; FISHBECK CRAIG ; LEMBCKE JEFFREY J ; WEATHERFORD LAMB**Assignee(s):** WEATHERFORD LAMB INC ; WEATHERFORD TECHNOLOGY HOLDINGS LLC ; WEATHERFORD TECHNOLOGY HOLDINGS LLC2000 ST. JAMES PL.HOUSTONTX77056US ; WEATHERFORD LAMB INC600 - 515 POST OAK BOULEVARDHOUSTONTX77027US ; LEMBCKE JEFFREY JOHN ; WEATHERFORD AND LAMB INC**Inventor(s):** (std): BODE JEFFREY ; FISHBECK CRAIG ; LEMBCKE JEFFREY JOHN ; LEMBCKE JEFFREY J ; JEFFREY BODE ; CRAIG FISHBECK**Inventor(s):** LEMBCKE JEFFREY JOHNUS ; FISHBECK CRAIGUS ; LEMBCKE JEFFREY ; BODE JEFFREYUS**Agent(s):** FISHER ADAMS KELLY PTY LTD; FISHER ADAMS KELLY CALLINANS; FISHER ADAMS KELLY; SPRUSON AND FERGUSON; DEETH WILLIAMS WALL LLP; MARCHITELLI MAURO; PATTERSON AND SHERIDAN LLP**Designated states:** AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL PL PT RO RS SE SI SK TR YU**22) Family number: 34246064** (US2007044956A)

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Title: ANNULAR CHOKE**Abstract:** An apparatus that is usable with a well includes a tubular member, an annular body and plugs. The tubular member includes a wall that defines a passageway to communicate a fluid, and an opening extends through the well. The annular body circumscribes the wall, and the annular body includes orifices that are adapted to communicate the fluid with the opening. The plugs are adapted to be moved to controlled positions relative to the orifices to regulate at least one of a

flow rate of the fluid through the opening and a pressure differential across the opening.

Classifications:

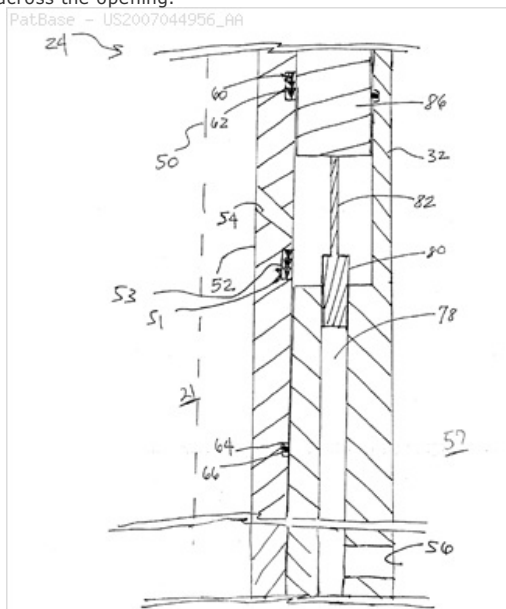
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E21B33/12 E21B34/00 (Core/Invention)

CPC: E21B34/08 E21B34/10 E21B34/101

European: E21B34/08 E21B34/10 E21B34/10E

US: 166/179 166/316 166/373 166/386



Family:

Publication number	Publication date	Application number	Application date
US2007044956 AA	20070301	US20050161939	20050823
US7451825 BB	20081118	US20050161939	20050823

Priority:

US20050161939 20050823

Probable Assignee: SCHLUMBERGER TECHNOLOGY CORP

Assignee(s): (std): SCHLUMBERGER TECHNOLOGY CORP

Inventor(s): (std): JONAS JASON K

Inventor(s): JONAS JASON

Agent(s): SCHLUMBERGER RESERVOIR COMPLETIONS; TROP PRUNER AND HU PC; WRIGHT DARYL R; GALLOWAY BRYAN P; DARYL R; BRYAN P

23) Family number: 42750876 (US2010096023A)

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Title: PRESSURE SURGE SENSOR AND ASSEMBLY INCLUDING SUCH A SENSOR AND A RUPTURE DISC

Abstract: A pressure surge sensor has a body having a cylinder passage, a magnetically actuated electrical switch mounted on the body, and a piston member movable along the passage relative to the switch. The piston member carries a magnet. When the cylinder passage is coupled to a fluid pressure surge source, a fluid pressure surge applied causes the piston member to move along the cylinder passage relative to said switch, thereby actuating the switch. A breakable retainer element restrains the piston member against movement, and the piston is freely movable along the cylinder passage, after release by the retainer. The pressure surge sensor is suitable to be arranged downstream of a rupture disc, which releases overpressure of a pressurised apparatus, for example an extrusion apparatus, or a gas handling or gas storage system.

Classifications:

International (IPC 8-9): F16K17/16 F16K17/40 F16K37/00

G01L19/12 G01L9/00 (Advanced/Invention);

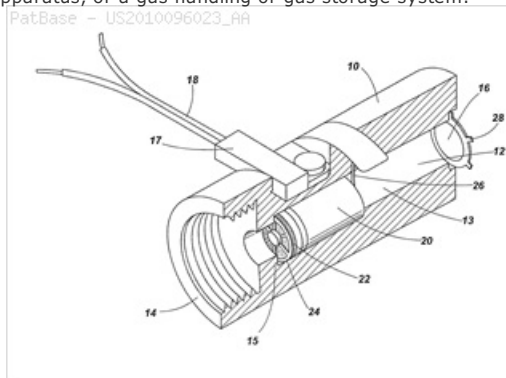
F16K17/00 F16K17/02 F16K37/00 G01L19/00

G01L9/00 (Core/Invention)

CPC: F16K37/0041 F16K37/0033 F16K17/16 G01L9/0089 G01L19/12 Y10T137/1632 Y10T137/1692

European: F16K17/16 F16K37/00D2 G01L9/00F

US: 137/68.11 137/68.110S 137/68.19 137/68.190P



Family:

Publication number	Publication date	Application number	Application date
DE602009021990 D1	20140410	DE200960021990T	20091019
EP2177799 A1	20100421	EP20090252442	20091019
EP2177799 B1	20140226	EP20090252442	20091019
ES2462400 T3	20140522	ES20090252442T	20091019
GB200819104 A0	20081126	GB20080019104	20081017
GB200918292 A0	20091202	GB20090018292	20091019
GB2465868 A1	20100609	GB20090018292	20091019
GB2465868 B2	20151216	GB20090018292	20091019
US2010096023 AA	20100422	US20090581462	20091019

Priority:

Probable Assignee: ELFAB LTD**Assignee(s):** (std): ELFAB LTD ; WIDDAS CHRISTOPHER JOHN**Assignee(s):** ELFAB LIMITED**Inventor(s):** (std): WIDDAS CHRISTOPHER JOHN**Inventor(s):** CHRISTOPHER JOHN WIDDAS**Agent(s):** LEINWEBER AND ZIMMERMANN; PAGET HUGH CHARLES EDWARD; VALLEJO JUAN PEDRO; STITES AND HARBISON PLLC**Designated states:** AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR**24) Family number: 45000431** (US2010122811A)

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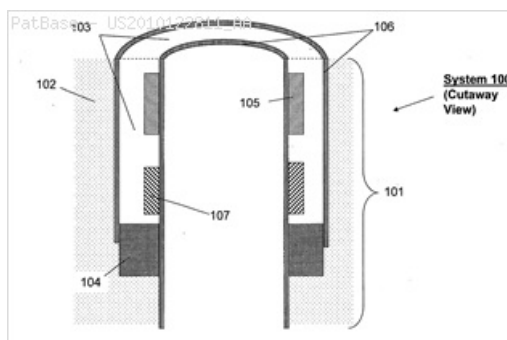
Title: SYSTEMS AND METHODS FOR MITIGATING ANNULAR PRESSURE BUILDUP IN AN OIL OR GAS WELL

Abstract: The present invention is generally directed to systems and methods for mitigating temperature-related pressure buildup in the trapped annulus of an oil or gas well, wherein such systems and methods employ production and/or tieback casing having one or more pressure mitigating chambers., and wherein such chambers make use of pistons, valves, and burst disks to mitigate pressure increases within the annulus. Such systems and methods can provide advantages over the prior art, particularly with respect to offshore wells.

Classifications:**International (IPC 8-9):** E21B17/10 E21B33/035 E21B34/06

E21B34/08 E21B41/00 (Advanced/Invention);

E21B33/03 E21B41/00 (Core/Invention)

CPC: E21B17/1078 E21B34/063 E21B33/035 E21B34/06**European:** E21B17/10T E21B34/06B**US:** 166/243 166/243S 166/244.1 166/244.100P 166/324 166/364**Family:**

Publication number	Publication date	Application number	Application date
AU2009316726 AA	20100527	AU20090316726	20091117
AU2009316726 BB	20151022	AU20090316726	20091117
BRPI0921300 A2	20151229	BR2009PI21300	20091117
CA2743164 AA	20110510	CA20092743164	20091117
CN102216557 A	20111012	CN200980145817	20091117
CN102216557 B	20140924	CN200980145817	20091117
EA020176 B1	20140930	EA20110070704	20091117
EA201170704 A1	20120130	EA20110070704	20091117
GB201108285 A0	20110629	GB20110008285	20091117
GB2477670 A1	20110810	GB20110008285	20091117
GB2477670 B2	20130213	GB20110008285	20091117
NO20110890 A	20111114	NO20110000890	20110616
US2010122811 AA	20100520	US20080272924	20081118
US8066074 BB	20111129	US20080272924	20081118
WO10059638 A2	20100527	WO2009US64828	20091117
WO10059638 A3	20100715	WO2009US64828	20091117

Priority:

US20080272924 20081118 WO2009US64828 20091117

Probable Assignee: CHEVRON USA INC**Assignee(s):** (std): CHEVRON USA ; CHEVRON USA INC ; MASKOS KRYSTIAN K ; FRENCH MICHAEL R ; CHEVRON U S A**Assignee(s):** CHEVRON U S A INC**Inventor(s):** (std): FRENCH MICHAEL R ; MASKOS KRYSTIAN K**Inventor(s):** MICHAEL R FRENCH ; KRYSTIAN K MASKOS**Agent(s):** FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; HERBERT SMITH FREEHILLS; FPA PATENT ATTORNEYS PTY LTD; SIM AND MCBURNEY; AIRD AND BERLIS IP PARTNERSHIP LTD; CHEVRON USA INC LAW INTELLECTUAL PROPERTY GROUP; EDWARD; MICKELSON EDWARD T ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**25) Family number: 50933301** (US2012090852A)

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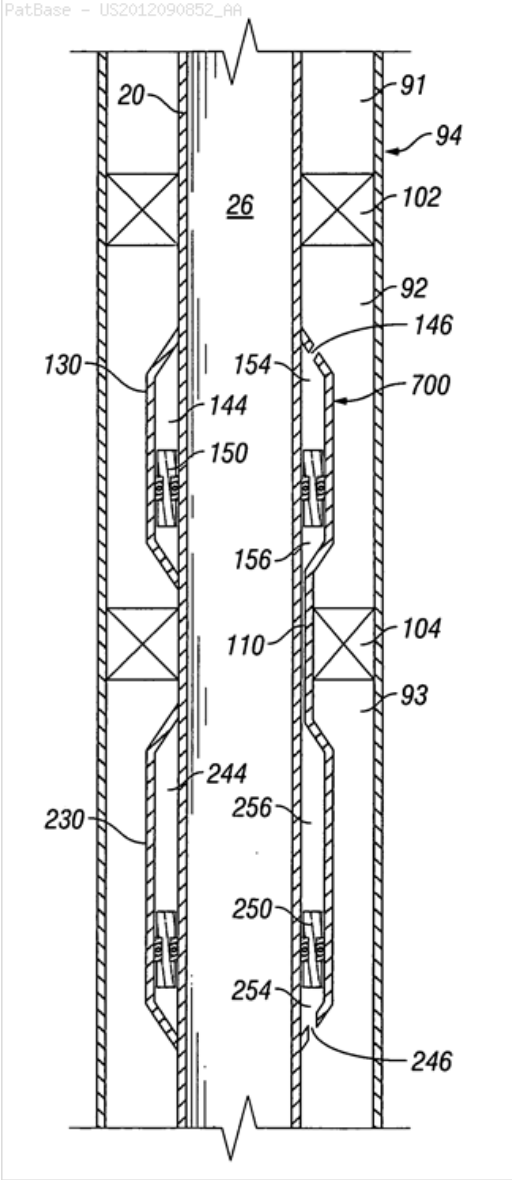
Title: APPARATUS AND METHOD FOR COMPENSATING FOR PRESSURE CHANGES WITHIN AN ISOLATED ANNULAR SPACE OF A WELLBORE

Abstract: Pressure relief devices comprise a chamber having a piston disposed therein. One side of the piston defines a hydrostatic chamber in fluid communication with an outside environment, such as an isolated wellbore annulus, through a

port. The other side of the piston defines a sealed or isolated chamber. The pressure relief device permits changes in pressure in the isolated wellbore annulus to be distributed into the chambers so as to either reduce the pressure within the isolated wellbore annulus or increase the pressure within the wellbore annulus, both of which lessen the likelihood that the change in pressure within the isolated wellbore annulus will damage wellbore components disposed therein.

Classifications:

International (IPC 8-9): E21B23/00 E21B33/00 E21B33/12
E21B33/124 E21B34/00 E21B34/06 (Advanced/Invention)
CPC: E21B33/00 E21B33/12 E21B33/124 E21B34/06
European: E21B33/00
US: 166/316 166/316S 166/373



Family:

Publication number	Publication date	Application number	Application date
AU2011318418 AA	20120426	AU20110318418	20111011
AU2011318418 BB	20141002	AU20110318418	20111011
BR112013009664 A2	20160712	BR20131109664	20111011
GB201305390 A0	20130508	GB20130005390	20111011
GB2497481 A1	20130612	GB20130005390	20111011
GB2497481 B2	20180725	GB20130005390	20111011
GC3419 A	20150323	GC2011P019521	20111015
NO20130404 A	20130510	NO20130000404	20130319
US2012090852 AA	20120419	US20100925307	20101019
US8347969 BB	20130108	US20100925307	20101019
WO12054253 A2	20120426	WO2011US55663	20111011
WO12054253 A3	20120705	WO2011US55663	20111011

Priority:

US20100925307 20101019 WO2011US55663 20111011

Probable Assignee: BAKER HUGHES INC

Assignee(s): (std): BAKER HUGHES A GE CO LLC ; BAKER HUGHES INC ; MILLS AUBREY C ; ORR BENJAMIN R ; WOOD EDWARD T

Inventor(s): (std): AUBREY C MILLS ; BENJAMIN R ORR ; EDWARD T WOOD ; MILLS AUBREY C ; MILLS AUBREY CLIFTON ; ORR BENJAMIN R ; WOOD EDWARD T

Agent(s): FREEHILLS PATENT ATTORNEYS; FPA PATENT ATTORNEYS PTY LTD; SABA AND CO TMP; GREENBERG TRAUIG LLP; ANTHONY F; PORTER ANDRE J

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: DOWNHOLE TOOL FOR USE IN A DRILL STRING

Abstract: A downhole tool in a drill string for mitigating hazards of a blockage in an annulus of the drill string. The downhole tool can sense blockages and selectively recirculate flow from within the annulus back to surface. Further, the downhole tool is made up of segments that are selectively detachable from one another, so that the segments above the point of detachment are removable from a wellbore. The bypass assembly includes a sleeve in the downhole tool with openings in its side; when the annulus reaches a set pressure, the sleeve slides to a position so the openings register with ports formed through a side of the tool to allow bypass flow. A processor in the downhole tool senses movement of the string, and when the string is axially stationary more than a designated period of time, the processor emits signals to detach the segments.

Classifications:

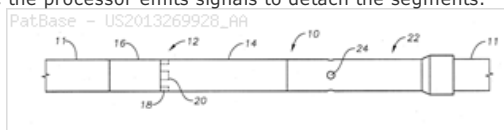
International (IPC 8-9): E21B17/06 E21B17/18 E21B21/00

E21B21/08 E21B21/10 E21B21/12 E21B34/06

E21B34/10 (Advanced/Invention)

CPC: E21B21/003 E21B17/06 E21B21/08 E21B21/103

US: 1/1 166/113 166/319



Family:

Publication number	Publication date	Application number	Application date
US2013269928 AA	20131017	US20130828244	20130314
US9404326 BB	20160802	US20130828244	20130314
WO13155257 A2	20131017	WO2013US36096	20130411
WO13155257 A3	20141113	WO2013US36096	20130411

Priority:

US20120623786P 20120413 US20130828244 20130314

Probable Assignee: SAUDI ARABIAN OIL CO

Assignee(s): (std): ARAMCO SERVICES CO ; SAUDI ARABIAN OIL CO

Inventor(s): (std): ZHOU SHAOHUA

Agent(s): BRACEWELL LLP; KEITH R; CONSTANCE G; RHEBERGEN CONSTANCE GALL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: TEMPERATURE ACTIVATED ZONAL ISOLATION PACKER DEVICE

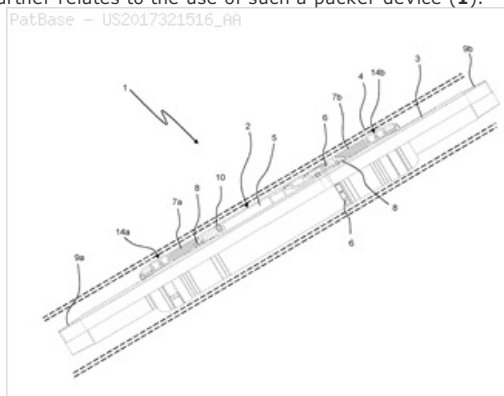
Abstract: The present invention relates to a packer device (1) for sealing against an inner surface of a surrounding pipe or casing string (4), preferably for isolating zones or sections in an oil well, comprising a tubing body (3) and at least one sealing element (7a, b), where a cylinder/piston arrangement (2) comprises a cylinder (5) having a closed volume containing a fluid, such as a gas or liquid, arranged to expand when exposed to heat thereby exerting a mechanically pressure on movable elements (12), initially locked in a fixed position by means of at least one fixing element, such as a shear member (6), and where the movable elements (12) are adapted to be released into an operative state at a predetermined axial force, exerted by the closed volume in the cylinder (5), resulting in that the at least one sealing element (7a, b) is pressed radially outwardly in such a way that it seals the packer device (1) against the surrounding pipe-/casing string (4). The invention is achieved by that an endcap (13) is arranged to cover an internal piston (11) and minimize the area of the internal piston (11) that is exposed to the surrounding pressure in the well (PW) acting against the fluid pressure (P1) inside the cylinder (5). The invention also relates to a method for activating a packer device (1) to seal against the surface of a surrounding pipe or casing string (4) and the invention further relates to the use of such a packer device (1).

Classifications:

International (IPC 8-9): E21B23/06 E21B33/12 E21B33/122

E21B33/128 (Advanced/Invention)

CPC: E21B33/1285 E21B33/12 E21B33/122 E21B33/1208 E21B23/06



Family:

Publication number	Publication date	Application number	Application date
CA2967776 AA	20170512	CA20152967776	20151117
CN107002476 A	20170801	CN201580061974	20151117
CO20170004566 A2	20170920	CO20170004566	20170505
EA201790941 A1	20170929	EA20170090941	20151117
EP3221549 A1	20170927	EP20150801256	20151117
ID201803392 A	20180406	ID2017P0003663	20151117
SE201451379 A1	20160518	SE20140051379	20141117
US2017321516 AA	20171109	US20150525556	20151117
WO16079662 A1	20160526	WO2015IB58865	20151117

Priority:

SE20140051379 20141117

WO20151B58865 20151117

Probable Assignee: VANGUARD OIL TOOLS AND SERVICES LLC

Assignee(s): (std): VANGUARD OIL TOOLS AND SERVICES LLC

Assignee(s): BARTON LEN ; JOHANSSON MATS ; LOVIKNES BORRE

Inventor(s): (std): BARTON LEN ; JOHANSSON MATS ; LOVIKNES BORRE

Inventor(s): MATS JOHANSSON ; LEN BARTON ; BORRE LOVIKNES

Agent(s): BORDEN LADNER GERVAIS LLP; JOSE ANDRES RINCON USCATEGUI; ZACCO SWEDEN AB; HERU LUKITO SH

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW