

METHOD FOR EMERGENCY PLUGGING AN UNDERSEA WELL AND APPARATUS FOR CARRYING OUT SAID METHOD

Field of invention

The invention relates to the oil-and-gas industry and can be used for emergency killing of wells.

Description of conventional art

A method of isolation of thief zones in wells is known in which a gradual squeezing of some viscoelastic material and cement slurry into a thief zone of the well, there at cement slurry squeezing is performed after curing viscoelastic material in the well for its gelling till it acquires its structural strength of at least 80 per cent of its maximum (see RU 2111337C1, cl.E21B33/13).

The common method can be used to kill wells under fair conditions. The common method suffers from such disadvantage as impossibility to use it for killing an underwater flowing well when the well is not isolated from surrounding aqueous medium. Such situation can occur, for instance, in case of failure of an underwater well when a preventer is broken.

The closest technical prototype for variant 1 of the device is an inflatable cementer unit which consists of the first extendable tubular element with a pair of ends, the first pair of ring terminal supports to fix corresponding ends of the first tubular element relative to the mandrel located in the first tubular element, one of the terminal supports being mobile and the other terminal support being fixed relative to the mandrel, and the first fixing ring unit deploying from one of the terminal supports to reinforce the first tubular element while creating pressure inside it and its extending, hinged to one of the terminal supports with one of its ends to reinforce the first tubular element while creating pressure inside it and its extending, capable to expand at its other end and containing lots of plates disposed in a ring configuration, hinged to mobile terminal support with one of their ends and having, each of them, a width growing from its hinged end to its other end (see RU 2384692 C2, cl. E21B 33/12, E21B 49/00).

The common device can be used for some temporary isolation of a part of a borehole, but cannot be used for killing a flowing well, as it does

not dispose of means either to introduce a kill fluid into the hole depth in condition of a counter-current flow of oil, gas, water and muck mixture or to fix at a target depth, as extension of tubular elements provokes a considerable growth of expulsive force.

The closest technical prototype for variant 2 of the device is an inflatable cementer unit which consists of the first extendable tubular element with a pair of ends, the first pair of ring terminal supports to fix corresponding ends of the first tubular element relative to the mandrel located in the first tubular element, one of the terminal supports being mobile and the other terminal support being fixed relative to the mandrel, and the first fixing ring unit deploying from one of the terminal supports to reinforce the first tubular element while creating pressure inside it and its extending, hinged to one of the terminal supports with one of its ends to reinforce the first tubular element while creating pressure inside it and its extending, capable to expand at its other end and containing lots of plates disposed in a ring configuration, hinged to mobile terminal support with one of their ends and having, each of them, a width growing from its hinged end to its other end (see RU 2384692 C2, cl. E21B 33/12, E21B 49/00).

The common device can be used for some temporary isolation of a part of a borehole, but cannot be used for killing a flowing well, as it does not dispose of means either to introduce a kill fluid into the hole depth in condition of a counter-current flow or to fix at a target depth, as expansion of tubular elements provokes a considerable growth of expulsive force.

Disclosure of the invention

The object of the invention and its corresponding technical result consists of decreasing of volume of consumables and inputs for well killing and also providing a possibility of an emergency killing of a flowing well of underwater head position.

The mentioned technical result of the method of an emergency killing of a flowing well of underwater head position that consists of squeezing of cementing composition in, basing on a preliminary estimation of the well state and pressure therein, is achieved by determination of the size of the well section to be cemented, and the depth of the injector installation in the well, the injector fixed on a tank of a cementing composition and placed into a bag made of some flexible material, is bottomed and inserted into the head of the drop-out well at a target depth, the bag is filled in with cementing composition from the tank with the help of the

injector, providing for a providing for a firm contact of outer surface of the bag with inner surface of the well section, the injector being held at the target depth by the weight of the whole structure filled with the cementing composition, after squeezing pressure in the bag is kept up till the cementing composition hardening.

In addition –injector is inserted into the wellhead directly or through an open emergency preventer with the help of a robot or a bathyscaphe;

- weight of the tank with the cementing composition is chosen in such a way that it outdoes force expulsing the injector from the well during the cementing composition squeezing;
- bag dimensions, material it is made of, pressure of cementing composition squeezing are chosen so that the bag having been filled with the cementing composition stuffed the well section's inner volume and bore against the well's inner surface with its outer surface.

The task and correspondent technical result consists of a possibility of emergency killing of a blowing well by means of a possibility to overcome floating force of fluid flow while the device inserting down to the target depth and the extendable element volume gain.

The mentioned technical result is achieved by means of addition of a cementing composition tank rigidly connected to the pipe and introduced into the device implementing the method of emergency killing of a well of underwater head position, variant 1, that includes a pipe and an extendable element, the tank is provided with a piston that divides the inner room of the tank into at least two chambers: the first chamber being filled with a cementing composition and connected to the pipe for a cementing composition squeezing into the extendable element, and the second chamber is made so that to be filled in with outside water, the pipe being provided with a blanked-off lower end, the extendable element is made of some flexible material and provided with a possibility to be filled in with the cementing composition from the tank through a hole in the pipe sidewall.

In addition, - the pipe length is chosen to let the extendable element settle itself in the well section having intact sides and have the length appropriate for a reliable killing of the well;

- the extendable element is made like a bag in the form close to a cylinder and tied with elastic belts in its baseline preoperational condition;
- the tank is provided with some holders for hanging on a going-in rope that are made to let the centre of gravity shift and permit the structure angle of slope to change;
- the tank is provided with guides for piston moving;
- the inner room of the first tank chamber is connected to the inner room of the pipe through a valve or a controlled gate to prevent a preliminary run-out of the cementing composition under its own weight into the extendable element;
- the second chamber of the tank is provided with a pump and a cable for its control from some surface craft;
- the structure is provided with an electric motor, a video camera and a headlight to control the device from some surface-craft;
- lower bearing face of the pipe is provided with a tapered tip-plug;
- the extendable element butt is fixed on a spring-loaded sleeve mounted on the pipe and provided with a possibility to travel along the pipe at a gain in extendable element volume.

The task and correspondent technical result consists of a possibility of emergency killing of a blowing well by means of a possibility to overcome floating force of fluid flow while the device inserting down to the target depth and the extendable element volume gain.

The mentioned technical result is achieved by means of addition of a cementing composition tank rigidly connected to the pipe and introduced into the device implementing the method of emergency killing of a well of underwater head position, variant 2, that includes a pipe and an extendable element, the tank is provided with a piston that divides the inner room of the tank into at least two chambers: the first chamber being filled with a cementing composition and connected to the inner room of the extendable element, and the second one is made so that to be filled with outside water, the extendable element is made of some flexible material and provided with a possibility to be filled in with the cementing composition from the tank, and envelops the lower part of the pipe, its upper part being provided with a blocking unit and pipeline holding elements.

In addition, - the pipe length is chosen to let the extendable element settle itself in the well section having intact sides and have the length appropriate for a reliable killing of the well;

- the extendable element is made like a bag in the form close to a cylinder and tied with elastic belts in its baseline preoperational condition;
- the tank is provided with some holders for hanging on a going-in rope that are made to let the centre of gravity shift and permit the structure angle of slope to change;
- the inner room of the first tank chamber is connected to the inner room of the extendable element through a valve or a controlled gate to prevent a preliminary run-out of the cementing composition under its own weight into the extendable element;
- the second chamber of the tank is provided with a pump and a cable for its control from some surface craft;
- the section of the pipe located inside the tank is made like a guide for the piston moving;
- the blocking unit is mounted in the upper part of the pipe and serves to output the fluid flow or to squeeze cementing composition into the well;
- the structure is provided with an electric motor, a video camera and a headlight to control the device from some surface craft;
- the extendable element butt is fixed on a spring-loaded sleeve mounted on the pipe and provided with a possibility to travel along the pipe at a gain in extendable element volume;
- membrane valves for each chamber are installed on the tank sidewalls providing for balancing pressure therein with environmental one.

Industrial use of invention

The invention is explained with the help of drawings, where FIG.1 shows the device's trip in hole to implement the method of emergency killing of a well of underwater head position, FIG.2 represents a drawing of the device, its variant 1, to implement the method of emergency killing of a well of underwater head position at the moment of inserting of the device into the well, FIG.3 is a drawing of the device, its variant 1, to implement the method of emergency killing of a well of underwater head position at the moment of squeezing the cementing composition, FIG.4 – is a drawing of the device, its variant 2, to implement the method of emergency killing of a well of underwater head position.

The following nomenclature is used in the drawings: 1 – pipe, 2 – expandable (extendable) element –a bag, 3 – tank, 4 – cementing composition, 5 – holes in the pipe sidewall (perforation), 6 – piston, 7 – pump for outside water squeezing, 8 - spring-loaded sleeve , 9 – spring,

10 - elastic belts, 11 – holders, 12 – going-in rope, 13 – cable for pump control, 14 - above-water apparatus, 15 – gush of fluids from the well, 16 – robot or bathyscaph to install injector into a wellhead, 17 – well, 18 – bottom level, 19 - lower pipe end, 20 – water, 21 – piston guide, 22 – blocking unit with pipeline detachable holding elements for fluid pumping-out or cementing composition squeezing.

The method of emergency killing of a well of underwater head position consists of bottoming an injector fixed on a tank with a cementing composition and located inside a bag made of a flexible material and capable to take the shape of inner surface of the well while gaining its volume (FIG.1), and its inserting into a head of a failed well down to the target depth, squeezing cementing composition from the tank into the bag through the injector, keeping the injector at the target depth by means of the weight of the whole structure filled with a cementing composition, squeezing finished - keeping up pressure in the volume formed inside the bag up to the cementing composition hardening.

Injector is inserted into the wellhead directly or through an open emergency preventer with the help of a robot or a bathyscaph.

Weight of the structure filled with the cementing composition is chosen so that it exceeds the force expelling the injector out of the well while cementing composition squeezing, the bag dimensions and pressure during cementing composition squeezing being chosen so that the bag with cementing composition squeezed in, stuffed the well's inner volume taking its shape and tightly bore against the inner surface of the well with its outer surface.

The method of emergency killing of a well of underwater head position is implemented as follows:

A vessel – some surface craft provided with a lifting gear is placed over a failed well. A tank with an injector of an elongated form enveloped with a bag made of flexible material and having a cylinder-like form, is bottomed to the wellhead with a rope. Thanks to its material flexibility while gaining volume the bag can acquire the form of the inner surface of the well section by means of the following cementing composition squeezing into the bag from the tank through the injector which is so inserted into the failed wellhead down to the target depth. The injector is inserted with the help of a robot or a bathyscaph provided with a manipulator. The injector is mounted on the tank, its weight exceeding the floating force of the blowing out mixture - fluid affecting the going down

injector with the tank. The injector having been placed at the depth where oil-well casing is supposed not to have been destroyed or the rate of well casing decay is considered tolerable, the cementing composition squeezing into the bag begins and so the bag expands filling the inner room of the well section. Pressure in the bag is kept up with the help of a pump till the cementing composition hardening.

The extendable element having been grown, flexible material tightly bears against the inner sidewalls of the well reproducing irregularities of their surface.

The cementing composition having been hardened, the bag containing it works like a plug that fills the failed well section and keeps up at the target depth thanks to the weight of the structure, friction of the bag material against the inner surface of the well sidewalls and well or preventer sidewalls irregularities filled in.

Cementing depth must be chosen sufficient for a reliable killing of the well so that the cemented well section length provided for such a distribution of adhesive power on the well section inner surface that would permit to resist expulsing pressure of running out fluid flow.

Example 1.

For an emergency killing of an underwater well an injector is made and mounted at the bottom of the tank with a cementing composition. The injector is wrapped in a bag made of some flexible plastic material in a form close to a cylinder. The injector's length is defined so that the injector could be sunk up to the level of the well section still having intact sides of the casing column. Such length may be equal to 10 - 20 meters and more.

A failed emergency valve is taken away and the rest of the pipe at the bottom is cut away. Then an injector fixed on the tank is put down with a rope from a vessel and brought into the mouth of the well with the help of a robot.

When the injector is completely put down, the tank abuts on the upper edge of the casing column, preventer or bottom. A pump is switched on and the upper chamber of the tank is outside water flooded. Under the excessive pressure created by the pump a piston goes down and extrudes cementing composition from the tank through the injector into the bag enlarging its inner volume which fills the well's inner room. So

weight of the structure filled with the cementing composition can achieve some tens of tons and even more, that gets in the way of the injector and does not let it be extruded from the well by a blow out of oil, gas, water and muck (fluid) mixture.

The bag (extendable element) is made of some flexible material and after enlarging it reproduces the inner well surface form that provides for its keeping in place after the cementing composition is hardened.

Pressure inside the bag is being maintained by means of the pump up to the complete hardening of the cementing composition so that a plug formed in such a way keeps fluid from going out of the well, so the well can be considered killed.

The cementing composition is not washed out by the flow of the fluid like it can take place in the prototype, as it is closed in the space of the extendable element. The cementing composition volume is defined by the extendable element volume, weight of the composition and pressure, created by the pump, providing for resisting floating forces of the fluid till a complete hardening of the cementing composition.

The applied method may be implemented with the help of standard devices (a tank, a pipe, etc.) and electric appliances such as a pump, a tugger, etc).

So the applied method provides for an emergency killing of a well of underwater head position as well as for reducing of the cementing composition volume and material inputs into a well killing and respectively into post-accident cleaning-up.

The method of an emergency killing of a well of underwater head position, variant 1, can be implemented by a device consisting of a pipe (FIG.2), an extendable element – a bag, a tank for a cementing composition and water rigidly connected to the pipe made perforated with a plugged lower end, this latter provided with a tapered tip to insert the pipe into the well easier. Tank capacity is chosen so that weight of the tank filled with a cementing composition exceeds floating force of the flow leaving the well. The extendable element is made of some flexible material forming a closed space, the tube is mounted inside the extendable element, the tank is provided with a piston dividing the inner room of the tank into two chambers: the first one filled with the cementing composition and connected to the pipe for injecting the composition into the extendable element, and the second one is provided with a pump for injecting outside water into it.

The pipe length is chosen to let the extendable element be located in the well section with intact sides.

The extendable element is initially tied with elastic belts, and the tank is provided with holders to hang it to a going-in rope, that are made provided with a capability to shift the centre of gravity to change the structure angle of slope.

The upper part of the perforated pipe is provided with a valve, for example, an electromagnetic one, to prevent a preliminary cementing composition discharge under its own weight into the extendable element; The pump and the valve are provided with a cable to control the device from some surface craft.

The structure is provided with an electric motor, a video camera and a searchlight to control the device from some surface craft.

The tank is provided with guides for the piston moving.

The extendable element butt is mounted on a spring-loaded sleeve, mounted on the pipe and provided with a capability to move along the pipe when the extendable element is gaining volume.

The pipe length is chosen so that the extendable element sizes were sufficient for a reliable killing of the well.

Membrane valves are installed on sidewalls of the tank for each chamber for balancing pressure therein with environmental one.

The device to implement the method of emergency killing of a well of underwater head position, variant 1, works as follows.

One chamber of the tank is filled with a cementing composition. The other one intended for outside water squeezing, is filled with outside water that prevents it from deforming while going-down to depth. The device in its working condition is hung on a rope and put into the location of a failed well from a vessel. Elongated holding element makes the device keep its stable vertical orientation being hung. If the wellhead is tilting, the structure angle of slope is selected by means of shifting of suspension point and consequently of the center of gravity. By means of a robot or a bathyscaph the pipe mounted to the bottom of the tank is directed to the wellhead; after that the device is put down into the well. The device may

be provided with controlled motors, video cameras and searchlights to command its spatial orientation from a vessel, which permits not to use robots.

The extendable element in its initial condition is stretched by a spring-loaded sleeve and under environmental pressure, so it envelopes the pipe without any sagging. In addition the extendable element is tied with several elastic belts to exclude any sagging while the device above-water preparing and to reduce resistance while it's going down into the well. Membrane valves balance pressure in the tank with environmental pressure preventing a hydraulic shock while switching the motor on and electromagnetic valve opening close to the bottom.

The weight of the structure filled with a cementing composition is sufficient to overcome the flowing mixture (fluid) expulsive force. The pipe length is chosen so that it came to the depth where casing column sidewalls are intact or to the depth where well sidewalls destruction is considered to be tolerable, for reliable well killing. When the device is completely put into the well, the tank abuts against the casing column or preventer butt with its lower part, or settles on the ground.

The device having been put into the well, the pump is switched on and squeezes outside water into the correspondent tank chamber (FIG.3 shown by a flesh) creating overpressure which pushes the piston which in its turn pushes out cementing composition into the pipe. The piston moves along its guides which provide for its advance parallel to the tank walls.

As the pipe is made with its sidewalls perforated, cementing composition passes from it into the extendable element which gains volume. So the pipe with perforated sidewalls acts as an injector. Travel of the spring-loaded sleeve, the upper end of the extendable element being fixed to, makes the extendable element gain inner volume. Filling of the extendable element made of elastic material, with cementing composition makes the sleeve travel along the pipe that in its turn permits the extendable element to gain inner volume.

While cementing composition squeezing, the extendable element diameter grows and elastic belts stretch or snap so they don't oppose the extendable element to gain volume.

The extendable element sidewalls are made of some flexible material so having been filled with cementing composition, it bears against the well

inner walls filling their surface irregularities and providing for secure fixation of the device in the well after cementing composition hardening. During the time necessary for cementing composition hardening, pressure overcoming floating force of the fluid flow, is maintained in the extendable element by a pump.

Cementing composition having been hardened, the device becomes a reliable obstacle to the fluid going out of the well, so the well can be considered killed.

The claimed device can be made of some sheet and section metal by its machining, together with some durable cloth like Kevlar and standard facilities: water pump, electric motor, etc.

So the claimed device provides for the possibility of emergency killing of a blowing well by means of overcoming floating force of the fluid flow while inserting the device to the target depth of the well and gaining in extendable element volume.

Application of the claimed device excludes washing out of cementing composition from the well being killed.

A device for implementing the method of emergency killing of a well of underwater head position, variant 2, comprises of a pipe (FIG.4) and an extendable element, a tank for a cementing composition and water, mounted rigidly to the pipe that goes through the tank, and an extendable element made like a bag of some flexible material that forms some closed volume similar to a cylinder. Tank capacity is chosen so that its weight after filling with a cementing composition overcame floating force of the flow coming out of the well. In its upper part the pipe is provided with a locking unit to pump out oil-product or to squeeze cementing composition into the well, the locking unit being provided with some elements of releasable joint with pipeline for pumping out oil or squeezing cementing composition. The tank is provided with a piston which divides its inner room into at least two chambers: the first one is filled with a cementing composition and communicates with inner room of the extendable element, and the second one is provided with a pump for water squeezing.

The pipe length is chosen so that the extendable element could be placed in the well section with intact sidewalls.

The extendable element is tied with elastic belts, and the tank is provided with holders to be hung on a going-in rope which are made so that they were capable of center-of-gravity shifting to change the structure angle of slope.

The device is provided with a valve, for example, an electromagnetic one, to prevent a preliminary cementing composition discharge into the extendable element under its own weight.

The tank chamber for squeezing outside water in is provided with a pump and a cable for its control from some surface craft.

The pump and electromagnetic valve are provided with a cable for their control from some surface craft.

The structure is provided with an electric motor, a video camera and a searchlight to be controlled from some surface craft not using any robot.

The pipe inside the tank is made as a guide for a piston moving.

The pipe length is chosen so that the extendable element sizes were sufficient for a reliable killing of the well.

Membrane valves are installed on sidewalls of the tank for each chamber to balance pressure therein with the environmental one.

The device to implement the method of emergency killing of a well of underwater head position, variant 2, works as follows.

One chamber of the tank is filled with a cementing composition. The other one intended for outside water squeezing, is filled with outside water that prevents it from deforming while going-down to depth. The device in its working condition is hung on a rope and put into the location of a failed well from a vessel. Elongated holding element makes the device keep its stable vertical orientation being hung. If the wellhead is tilting, the structure angle of slope is selected by means of shifting of suspension point and consequently of the center of gravity. By means of a robot or a bathyscaph the pipe located lower than the tank, is directed to the wellhead; after that the device is put down into the well. The device may be provided with controlled motors, video cameras and searchlights to command its spatial orientation from a vessel, which permits not to use a robot or a bathyscaph.

The extendable element in its initial condition is rolled up and tied with elastic belts in several places to exclude any sagging while the device above-water preparing and to reduce resistance while it's going down into the well. The hollow pipe locking unit is open. Membrane valves balance pressure in the tank with environmental pressure preventing any hydraulic shock while switching the motor on and electromagnetic valve opening close to the bottom. A valve or a gate between the tank and extendable element is locked preventing cementing composition going into the extendable element.

The weight of the structure filled with a cementing composition and the hollow pipe opened in its initial condition, permit to overcome the floating force of flowing fluid mixture, affecting the extendable element. The pipe diameter is chosen according to the necessity to diminish the floating force affecting the extendable element by means of fluid flow free discharge through it: the larger is its inner diameter the less is this force. The pipe length is chosen so that it came to the depth where the casing column sidewalls are intact or to the depth where well sidewalls destruction is considered to be tolerable. When the device is put into the well completely, the tank with its lower part abuts against the casing column or preventer butt, or settles on the ground.

The device having been put into the well, the pump is switched on and squeezes outside water into the correspondent tank chamber (FIG.4 shown by a flesh) creating overpressure which pushes the piston which in its turn pushes out cementing composition into the extendable element through a correspondent connection, the valve or the gate between the tank and extendable element being open. The piston travels inside the tank along the pipe like along a guide.

The cementing composition from the tank travels to the extendable element which gains volume. Fluid flow is discharging free through the pipe into the sea, reducing floating force affecting the extendable element. While the extendable element volume is growing, elastic belts stretch or snap so they don't oppose the extendable element to gain volume. The extendable element sidewalls are made of some flexible material so having been filled with cementing composition, it bears against the well inner walls filling their surface irregularities and providing for secure fixation of the device in the well after cementing composition hardening. During the time necessary for cementing composition hardening, pressure overcoming floating force of the fluid flow, affecting the extendable element, is maintained in it by a pump. Cementing composition having been hardened, the device becomes a reliable obstacle to the

uncontrolled fluid going out of the well, so the well becomes a controlled one.

Cementing composition having been completely hardened, locking unit mounted on the end of the pipe is shutdown or used for fluid pumping-out or cementing composition squeezing, to achieve its complete killing, pipeline being connected to by means of locking unit detachable joints. The claimed device can be made of some durable cloth like Kevlar, some sheet and section metal by its machining, together with standard facilities: water pump, electric motor etc.

So the claimed device provides for the possibility of emergency killing of a blowing well by means of overcoming floating force of the flowing oil products affecting the extendable element.

Application of the claimed device excludes washing out of cementing composition from the well being killed.

In addition up to the complete well killing the device provides for a controlled access to the borehole passage.

What is claimed is:

1. A method of emergency killing of a well of underwater head position comprising a cementing composition squeezing, and characterized in that the well section to be cemented and depth of injector installation are preliminary sized up, basing on the well condition and pressure therein, an injector, fixed on a tank filled with a cementing composition, and placed in a bag made of some flexible material, is put down to the bottom and inserted at a target depth into emergency wellhead, the bag is filled with the cementing composition from the tank through the injector, firm adherence of the bag outer surface with the well section inner surface is assured, the injector being held at the target depth by the weight of the whole structure filled with the cementing composition, pressure in the bag after the cementing composition squeezing is kept up until the cementing composition hardening.
2. The method of claim 1, wherein the injector is inserted into a wellhead directly or through an open emergency preventer by means of a robot or a bathyscaph.
3. The method of claim 1, wherein weight of the tank filled with cementing composition is chosen so that it overcomes floating force, expulsing injector out of the well while cementing composition squeezing.
4. The method of claim 1, wherein dimensions of the bag, material it is made of and pressure of cementing composition squeezing are chosen so that the bag having been charged with the cementing composition, fills inner volume of the well section and firmly adheres to the inner surface of the well with its outer surface.
5. The device for implementing of the method of emergency killing of a well of underwater head position comprising a pipe and an expandable element, wherein a tank for a cementing composition, rigidly connected to the pipe, is inserted into it and placed in the wellhead, the tank is provided with a piston dividing the inner room of the tank into at least two chambers: the first chamber is filled with the cementing composition and connected to the pipe for the cementing composition squeezing into the expandable element, and the second chamber is made capable to be filled with outside water wherein the pipe is made with a blanked-off lower end and the expandable element is made of some flexible material providing for its inner room filling with the

cementing composition from the tank through a hole in the sidewall of the pipe.

6. The device of claim 5, wherein the pipe length is chosen so that the expandable element could be located in the well section with intact sidewalls and had a length sufficient for a reliable well killing.

7. The device of claim 5, wherein the expandable element is made like a bag in the form close to a cylindrical one and is tied with elastic belts in its initial condition.

8. The device of claim 5, wherein the tank is provided with holders for hanging on a going-in rope that are made to let the centre of gravity to shift and permit the structure angle of slope to change.

9. The device of claim 5, wherein the tank is provided with guides for a piston to move.

10. The device of claim 5, wherein inner room of the first chamber of the tank is connected to the inner room of the pipe by a valve or a controlled gate to prevent a preliminary cementing composition bleeding into the expandable element under its own weight.

11. The device of claim 5, wherein the second chamber of the tank is provided with a pump and a cable to be controlled from some surface-craft.

12. The device of claim 5, wherein the structure is provided with an electric motor, a video camera and a searchlight to control the device from some surface-craft.

13. The device of claim 5, wherein the lower bearing face of the pipe is provided with a tapered tip-plug.

14. The device of claim 5, wherein the butt of the expandable element is fixed on a spring-loaded sleeve which is mounted on the pipe and capable to move along the pipe at a gain in expandable element volume.

15. The device of claim 5, wherein for each tank chamber membrane valves are installed on the tank sidewalls to balance pressure therein and pressure outside.

16. The device for implementing of the method of emergency killing of a well of underwater head position comprising a pipe and an expandable element, wherein a tank for a cementing composition, rigidly connected to the pipe, is inserted into it and placed in the wellhead, the tank is provided with a piston dividing the inner room of the tank into at least two chambers: the first chamber is filled with the cementing composition and connected to the expandable element inner room, and the second one is made capable to be filled with outside water, wherein the expandable element is made of some flexible material providing for its inner room filling with the cementing composition from the tank, and envelopes the lower part of the pipe, its upper part being provided with a blocking unit and pipeline holding elements.

17. The device of claim 16, wherein the pipe length is chosen so that the expandable element could be located in the well section with intact sidewalls and had a length sufficient for a reliable well killing.

18. The device of claim 16, wherein the expandable element is made like a bag in the form close to a cylindrical one and is tied with elastic belts in its initial condition.

19. The device of claim 16, wherein the tank is provided with holders for its hanging on a going-in rope that are made to let the centre of gravity to shift and permit the structure angle of slope to change.

20. The device of claim 16, wherein inner room of the first chamber of the tank is connected to the inner room of expandable element by a valve or a controlled gate to prevent a preliminary cementing composition bleeding into the expandable element under its own weight.

21. The device of claim 16, wherein the second chamber of the tank is provided with a pump and a cable to be controlled from some surface-craft.

22. The device of claim 16, wherein the pipe section located inside the tank is made like a guide, the piston moves along.

23. The device of claim 16, wherein the locking unit with pipeline holding elements is mounted in the upper part of the pipe and is intended for fluid flow pumping out or cementing composition squeezing into the well.

24. The device of claim 16, wherein the structure is provided with an electric motor, video camera and a searchlight to control the device from some surface-craft.

25. The device of claim 16, wherein the butt of the expandable element is fixed on a spring-loaded sleeve which is mounted on the pipe and capable to move along the pipe at a gain in expandable element volume.

26. The device of claim 16, wherein for each tank chamber membrane valves are installed on the tank sides to balance pressure therein and pressure outside.