

CLAIMS

1. A valve arrangement (1) for a wellhead of a hydrocarbon well, the valve arrangement comprising
- 5 - a valve (10) comprising connection elements configured for sealingly and removably mounting of the valve in a port of a wellhead,
- an actuator device (20) for actuating the valve to move to an open position, the actuator device comprising
- 10 - a housing (30) having a through channel (32) extending between a first end (34), at which the valve is mounted, and a second end (36), the housing comprising at least one first port (40) extending through a sidewall (38) of the housing and leading into the through channel,
- an actuator rod (50) that is movably arranged in the through channel (32) and which is configured to open the valve by the actuator rod being movable between at least a
- 15 first position and a second position,
- a control device (60) arranged to control the movement of the actuator rod (50),
- characterised in that
- the through channel (32) comprises a first part (32a) and a second part (32b), and that said first part and said second part are separated by a separation device (54) that is
- 20 arranged in the through channel in a sealing manner,
- the first part (32a) of the through channel is delimited by the valve (10) at one end and by the separation device (54) at the other end, and
- the at least one first port (40) is a bleed off port and/or connectable to an external injection fluid source and it leads into the first part (32a) of the through channel.
- 25
2. The valve arrangement according to claim 1, wherein the actuator rod (50) is located inside the first part (32a) of the through channel.
3. The valve arrangement according to any one of the preceding claims, wherein the actuator
- 30 rod (50) is configured without a through bore in the longitudinal direction thereof.

4. The valve arrangement according to any one of claims 1-2, wherein at least a part of the actuator rod (50) comprises a hollow tube provided with perforations (52) made at an angle to its direction of movement.

5 5. The valve arrangement according to any one of the preceding claims, wherein at least a part of the separation device (54) is movable inside the through channel (32) in a sealing manner.

6. The valve arrangement according to any one of the preceding claims, wherein the separation device (54) comprises a piston (55) that is movable inside the through channel (32) in a sealing manner, wherein the piston is part of the actuator device (20) and the actuator rod (50) is connected to the piston.

10

7. The valve arrangement according to claim 6, wherein the control device (60) is configured to control a movement of the piston (55) and thereby control the movement of the actuator rod (50) connected to the piston.

15

8. The valve arrangement according to claim 6 or claim 7, wherein a chamber (62) is formed in the second part (32b) of the through channel and said chamber is delimited by the movable piston (55) and a fixed end member (63), wherein the housing (30) comprises at least one second port (64) leading into the chamber.

20

9. The valve arrangement according to claim 8, wherein the second port (64) is connectable to a hydraulic fluid source, and wherein the chamber (62) and the second port are parts of the control device (60) arranged to control the movement of the piston (55), by means of hydraulic fluid entering the chamber and exerting a force to move the piston and the actuator rod.

25

10. The valve arrangement according to any one of claims 6-8, wherein the control device (60) is an electrical control device that controls the movement of the piston (55).

30 ----