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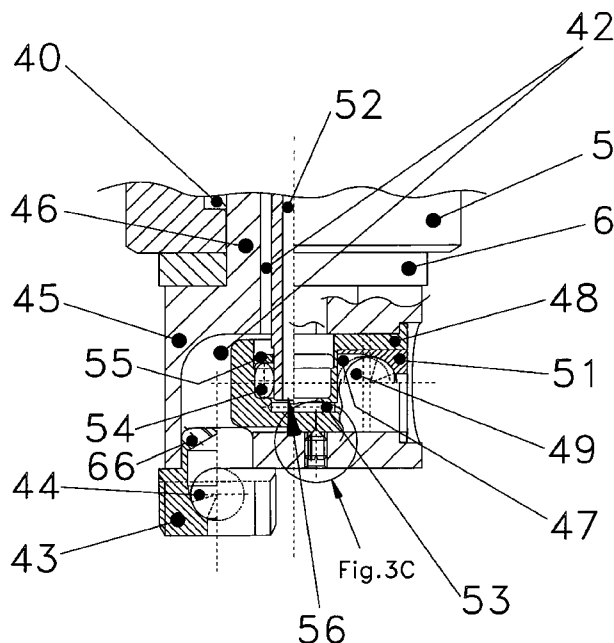
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(54) Title: MEASURING AND READING THE SIZE OF A PARAMETER OF A REMOTELY POSITIONED DEVICE

(57) Abstract: A sensor-reader combination for measuring the size of a parameter of a device, the device and reader are postponed at a different physical position from each other. The measuring is done in a measuring space (19, 38, 50, 111, 130) representing said device regarding to the to be measured size of a parameter, said space is positioned nearby said reader.



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AMENDED CLAIMS

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CLAIMS

1. Piston chamber combination comprising a piston in a chamber with a fluid exit and a sensor-reader combination
5 with a sensor for measuring a parameter **characterized in that** the sensor is arranged to measure the parameter in a measuring space (19, 38, 50, 78, 79, 81, 111, 130) before the fluid exit (78) of the chamber (72).
- 10 2. Piston chamber combination according to claim 1 wherein the fluid exit is provided with a check valve (76) .
3. Piston chamber combination according to claim 1 or 2 wherein the sensor is located in an enclosed measuring space
15 (47, 52, 53) in the piston.
4. Piston chamber combination according to claim 3 comprising a check valve (49, 51) between the enclosed measuring space (47, 52, 53) and the chamber (72) .
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5. Piston chamber combination according to claim 3 or 4 wherein the piston comprises a hollow piston rod (103, 123) enclosing the enclosed measuring space (47, 52, 53).
- 25 6. Piston chamber according to any one of the preceding claims 3 - 5 wherein a channel (61) with a very small diameter connects the enclosed measurement space to the chamber.
- 30 7. Piston-chamber combination according to claim 6 comprising a screw (60) for adjusting flow through the channel (61) .

8. Piston-chamber combination according to claim 7 wherein the screw (60) has a tapered head (63) matching a correspondingly widened end (62) of the channel and wherein a channel (64) runs through the head from the tapered side to an opposite side of the head.

9. Piston-chamber combination according to any one of the preceding claims 3 - 8 wherein the enclosed measuring space (47, 52, 53) comprises an inlet and an outlet valve initiated electrically under the control of a computer.

10. Piston-chamber combination wherein the sensor-reader combination comprises pressure sensor, selected from the group of pneumatic or electric pressure gauges (41), analogue or digital volt or current meters in combination with an electric or electronic sensor, and transducers (15) connected with mechanical conducting devices, such as wires, to an analogue or digital gauge.

11. Piston-chamber combination according to any one of the preceding claims wherein the sensor-reader combination comprises a temperature sensor.

12. Piston-chamber combination according to any one of the preceding claims wherein the piston-chamber combination is a pump comprising means for engaging the piston from a position outside the chamber and a fluid entrance connected to the chamber, the fluid entrance comprising a valve.

13. Piston chamber combination according to claim 12 wherein the piston comprises a piston rod with a handle on top of the piston rod, wherein the handle is provided with an electric or pneumatic pressure gauge.

14. Method of measuring pressure in a tyre during pumping by using a pump with a piston in a chamber and with a fluid exit connected to a hose and a check valve between the fluid exit and the hose **characterized in that** the tyre pressure is
5 measured indirectly by measuring the pressure in the chamber (72) before the check valve (76), at least during a pump stroke when the piston is pushed into the chamber (72) .

15. Method according to claim 14 wherein the pressure is
10 measured in an enclosed measuring space (47, 52, 53) in the piston and wherein the enclosed measuring space (47, 52, 53) is connected to the chamber (72) with an opening provided with a check valve (49) which provides an open connection between the enclosed measuring space (47, 52, 53) and the
15 chamber (72) when the piston is moved into the chamber (72) during a pump stroke and which closes off said-opening of the enclosed measuring space (47, 52, 53) during a return- stroke.