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(56) Documents Cited:
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(54) Title of the Invention: **Method for monitoring tanks used for isobaric gas storage**
Abstract Title: **Method for monitoring tanks used for isobaric gas storage**

(57) A pressure vessel (cylinder) is operated to store gas at a pressure that remains relatively steady by pumping in a hydraulic compensation liquid (HCL) to displace gas is it is withdrawn. The HCL flows back out as the cylinder is recharged with gas. The pressure of the HCL (and hence the pressure of the gas within the cylinder) is controlled by a positive displacement pump whose pressure rating exceeds the normal working pressure of the cylinder. At times when the cylinder is largely or completely emptied of its gas charge, an isolation valve disconnects the cylinder from the main part of the main gas manifold and a "water test" is conducted on the cylinder by using the positive displacement pump to raise the pressure of the HCL to a level above the normal operating pressure of the cylinder and hold it at that elevated pressure for a suitable (short) period. Through the regular conduct of such "water tests", there is very low probability that a catastrophic failure of the cylinder can happen when the cylinder is filled with pressurised gas.

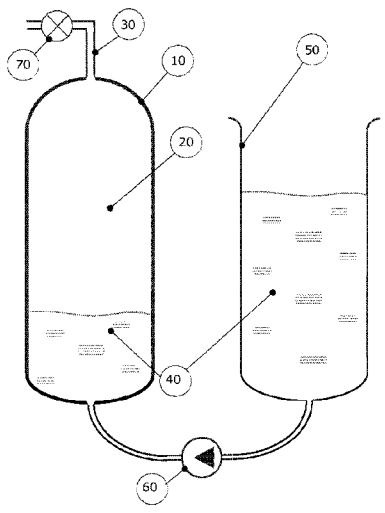

Figure 1

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