

[54] **METHOD OF MEASURING PROPERTIES OF A FLUID IN A CONTAINER AND DEVICE FOR REALIZING SAME**

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[21] Appl. No.: 787,327

[22] Filed: Apr. 14, 1977

[51] Int. Cl.<sup>2</sup> ..... G01N 29/02

[52] U.S. Cl. .... 73/53

[58] Field of Search ..... 73/32 R, 53, 61 R, 61.1 R, 73/67.5 R, 67.1, 290 V

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[57]

**ABSTRACT**

A method of measuring properties of a fluid in a container, wherein acoustic oscillation pulses are periodically applied to said fluid through the container wall and normally thereto, is disclosed. The acoustic signals are received in the zone of application of the acoustic oscillation pulses as envelopes of the pulse acoustic reverberation produced between the outer surface of the container wall and the fluid, said envelopes being used to form an electrical signal carrying information on the properties of the fluid. A device for measuring properties of a fluid in a container comprises an acoustic transducer positioned directly on the outer surface of the container wall and a series-connected circuit, composed of an electric pulse time delay unit, a gating pulse generator and a gating acoustic signal amplifier, coupled to the acoustic transducer. The device also comprises a pulse acoustic reverberation envelope detector having an input connected to the output of the gating amplifier and an output electrically connected to the input of a data-carrying electric signal shaper which is electrically coupled to a measuring unit.

22 Claims, 49 Drawing Figures

