

Title (en)

FLUID DENSITOMETER WITH EXCENTRICALLY SUPPORTED FLOAT/WEIGHT ASSEMBLY

Title (de)

FLUID-DICHTEMESSGERÄT MIT EXZENTRISCH GELAGERTER SCHWIMMKÖRPER-GEWICHT-ANORDNUNG

Title (fr)

DENSITOMETRE DE FLUIDE COMPORTANT UN ENSEMBLE FLOTTEUR/POIDS MAINTENU DE MANIERE EXCENTREE

Publication

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Application

EP 00919001 A 20000331

Priority

- GB 0001238 W 20000331
- GB 9907453 A 19990331

Abstract (en)

[origin: GB2348507A] A fluid density measurement device 10 comprises a float/weight assembly 20 with a float 22 and weight 24 pivotable about an axis 26. The float/weight assembly adopts an orientation about the horizontal axis which is dependent upon the density of the fluid in which the device is immersed. A reference wheel 74 is rotatably mounted freely and is eccentrically weighted so as always to adopt a defined orientation relative to the vertical direction. A follower wheel 72 is magnetically linked by magnets 70,76 so as to follow the rotation of the float/weight assembly. A detector 80 detects the relative positions of the two wheels, thus sensing the orientation of the float/weight assembly regardless of the rotary position of the device as a whole. Detection may be done electrically or electro-optically. Also, the detector 80 may take the form of an optical, capacitive, inductive or potentiometric detector as an alternative. The two wheels are housed in a pressure-resistant compartment 60. As an alternative to the magnetic coupling and the detector wheels, the float/weight assembly may alter the position of a magnetic core so as to vary the transmission characteristic between two coils. The coils can be coupled to the detector in the pressure-resistant compartment by inductive windings (Fig.4).

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