

Title (en)
APPARATUS AND METHOD FOR CONTINUOUSLY VISUALLY DETERMINING THE FILLING LEVEL OF LIQUIDS IN LIQUID STORAGE CONTAINERS OF VEHICLES OR AIRCRAFT

Title (de)
VORRICHTUNG UND VERFAHREN ZUR KONTINUIERLICHEN OPTISCHEN BESTIMMUNG DES FÜLLSTANDS VON FLÜSSIGKEITEN IN FLÜSSIGKEITSVORRATSBEHÄLTERN VON FAHRZEUGEN ODER FLUGZEUGEN

Title (fr)
DISPOSITIF ET PROCEDE DE DETERMINATION OPTIQUE CONTINUE DU NIVEAU DE LIQUIDES DANS DES RESERVOIRS A LIQUIDE DE VEHICULES OU D'AERONEFS

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Application
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Abstract (en)
[origin: WO2007107379A2] The invention relates to an apparatus and a method for continuously visually determining the filling level of liquids in a liquid storage container of a vehicle or aircraft which have a refraction index of at least 1.33 at room temperature and at a wavelength of 589 nm. The apparatus has an elongate measurement channel (3) which can be arranged on or in a liquid storage container such that the liquid located in the liquid storage container can enter the measurement channel (3) and form a liquid column (4) in the measurement channel (3), the extent of said liquid column in the longitudinal direction of the measurement channel (3) depending on the filling level of the liquid in the liquid container. A light-emitting device (8, 8') is arranged such that light (13, 14) which is emitted by the light-emitting device (8, 8') is introduced into the measurement channel (3) and can pass through said measurement channel in the longitudinal direction in such a way that the light (13, 14) at least partly passes through the liquid column (4) which is in use in the measurement channel (3). The light-emitting device (8, 8') can generate at least light of a predetermined wavelength or from a predetermined wavelength range. A detector arrangement (12, 8') is arranged such that light (10) which is emitted into the measurement channel (3) by the light-emitting device (8, 8') strikes the detector arrangement (12, 8') after passing through at least part of the liquid column (4). The wall (15) which defines the measurement channel (3) is designed such that, when used in the region of the liquid column (4), the reflection coefficient for light of the predetermined wavelength or from the predetermined wavelength range on the wall (15) is at least 70%, at least for an angle of incidence up to a predetermined limit angle.

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G01F 23/292 (2013.01 - EP US); **G01F 23/2928** (2013.01 - EP US); **Y10T 29/49002** (2015.01 - EP US)

Citation (search report)
See references of WO 2007107379A2

Cited by
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