



Portable Sounding Device

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PSD

Introduction

Portable Sounding Device – For easy, quick and accurate measurement of liquid substance with high transparency and low connectivity for a broad range of applications.

API Marine Portable Sounding Device is a stand-alone device, that complies with IMO's new ship exhaust gas regulations as of January 1, 2020, in order to accurately measure the level to liquid in a tank.

API Marine Portable Sounding Device consist of a highly advanced and reliable sensor that streamlines the process of level measurement of the liquid in tanks, but also accurate measurements of bunkered oil in case of cappuccino bunker.

With API Marine Portable Sounding Device, you will be able to determine the distance from the point of measurement to the surface of the liquid with high accuracy as an alarm will sound when the liquid sensors comes into contact with the liquid inside the tank.



Portable Sounding Device

Operation Principle

API Marine Portable Sounding Device was developed to realize portable tank sounding with an ultrasonic sensor. When ultrasonic sensor tip is covered with liquid, an ultrasonic signal is sent through a measuring tape to the main unit, and a buzzer/a lamp in the body are activated at the same time. Then a level between a tank top and a liquid surface (ullage) can be measured by reading figures on a measuring tape.



Advantages

- No sensitivity to foam
- Short measuring time (Ullage measurement)
- Possible to detect transparent liquid
- Portable type
- Weight : 1.36kg
- Compact size

Specifications

- Power Supply: 9V alkaline battery (Type 006P JIS/IEC 6LR/61 6LF/22)
- Sensor Accuracy: \pm mm
- Sensor Material: SUS316L
- Measuring tape: Length(30m), Material(Glass fiber)
- Ambient temperature: -20~70°C
- Working temperature: -20~70°C
- Body Material: ABS



Fuel Tank Level Measurement for Marine



Ballast Tank Level Measurement (for Marine)



Marine Draught Measurement



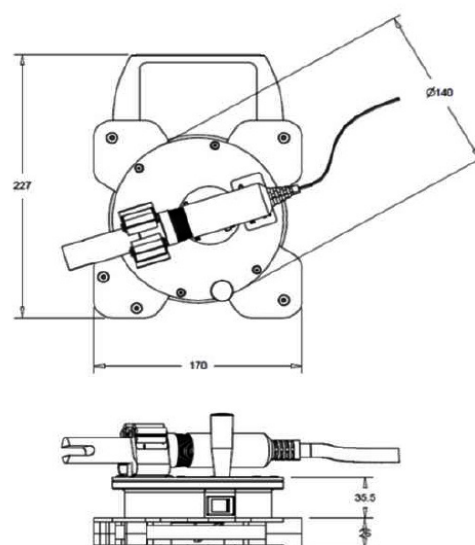
Inclining Experiment (for Marine)



Well Water Level Measurement



River Water Level Measurement



Portable type



External power source is not necessary (9V battery)

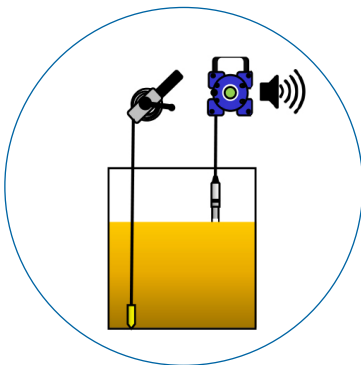


Glass fiber type measuring tape

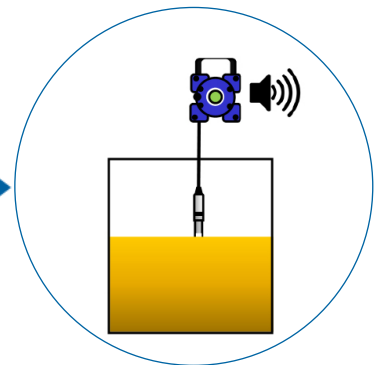
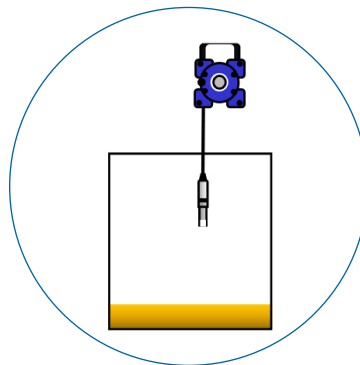


- Strong (Breaking load: abt. 1765N)
- Small expansion by change of temperature (abt. 0.15mm/°C)

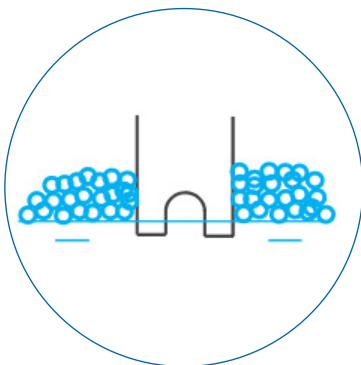
Short measuring time
(75% shorter than conventional type)



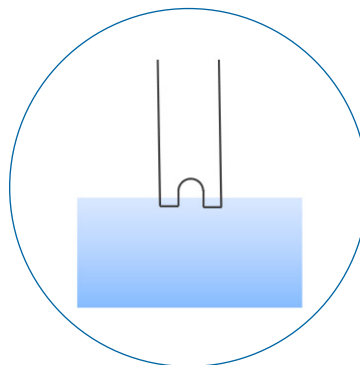
Overflow prevention



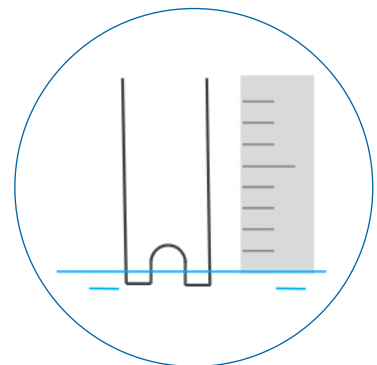
No sensitivity to foam



Possible to detect transparent liquid



High accuracy
(±2mm)



The IMO's new ship exhaust gas regulations start on January 1, 2020

Sulfur oxide (SO_x) restrictions

As of January 1, 2020, the IMO (International Maritime Organization) will put into effect new regulations on sulfur oxide in maritime exhaust gas, in which the limit on sulfur oxide content in fuel oil that is mainly for maritime use will be changed from 3.5% to 0.5%

In complying with the new regulations, there will be an increasing number of cases in which high transparency and low viscosity compatible fuels such as MGO are supplemented.

In these cases, as is shown in the photo at right, there has been concern with conventional scales due to past experience measurement of tank contents.

< C Heavy oil >



<MGO>





With state-of-the-art technology we bring efficiency to our customers

API Marine is a house of competence, where development, design and production processes are united in unique solutions for advanced tank control. Complete liquid cargo control systems can be supplied – from sensors in the tank and operators' stations to the calculation software, all fulfilling IMO requirements.

API Marine is certified according to ISO 9001:2015

We want to contribute to our customer's profitability by supplying high quality products, excellent service and state-of-the-art high-tech solutions, where reliability and durability are keywords!

