



### ITAMA...One Port of Call

The **I**ntelligent **T**ank **M**anagement concept brings together design and manufacture of all sensors, mechanical components and central monitoring / control systems from one provider, with optimum performance and support ensured.

#### Products



**Tank Cleaning** - Fully programmable fixed machines. High reliability/low maintenance magnetic transmission. Portable machines designed for optimum handling.



**Tank ventilation** - Water and Air driven options with "sealed for life" lubrication.



**Pressure / vacuum control valves** - A unique compact design with innovative and efficient dual nozzle.



**Nitrogen / IGS Systems** - Tailored IGS and Nitrogen generation systems based on 20 years know-how.

#### PSM Instrumentation Ltd

Unit 3 Burrell Road,  
Haywards Heath,  
West Sussex,  
RH16 1TW UK

Tel: +44 (0) 1444 410040

sales@psmmarine.com

www.psmmarine.com

PSM is able to offer complete design solutions including installation and commissioning services.

We work worldwide alongside ship designers, owners and operators, maintenance and repair companies to understand their specific application needs in order to deliver the best possible technical solution. Sales and technical support is provided directly or via a global network of accredited Partners.

Whatever your tank gauging requirement, contact PSM for the solution.



## Tank Gauging Solutions for All Ships



PSM has more than thirty years' experience in providing tank gauging solutions for shipboard applications onboard both commercial and military vessels.

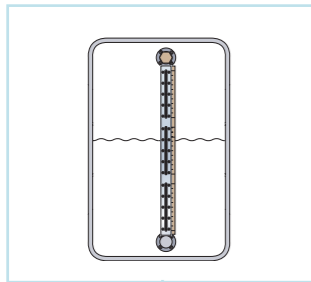
From a single switch to complete systems, our type approved and quality certified range of transmitters, gauges and switches are purpose designed for all onboard tanks including fuel oils, lubricants, hydraulic fluids, ballast water and bilge.

Whatever the type and size of your vessel PSM has a solution. A choice of measurement technologies ensures we can offer the optimum solution. From high performance radar transmitters, to electro-pneumatic systems, to unique digital hydrostatic transmitters which provide significant installation cost and performance benefits.

# Solutions for ship's tank gauging applications using PSM instruments and systems

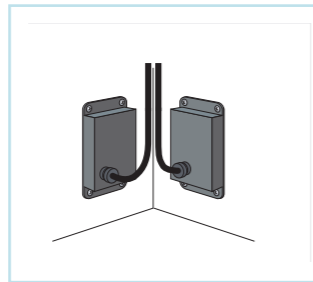
## Local visual indication of tank level

KD level gauges with flat or reflex glass provide a direct view of the level inside lubricating oil or boiler water feed tanks



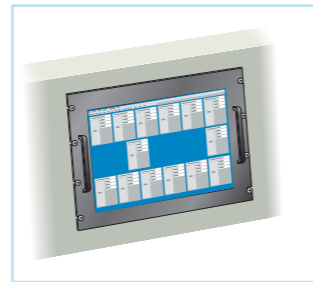
## Ship's trim and list measurement

A pair of solid state, inclinometers installed 90° with respect to each other, measure bow <-> stern and port <-> starboard angles



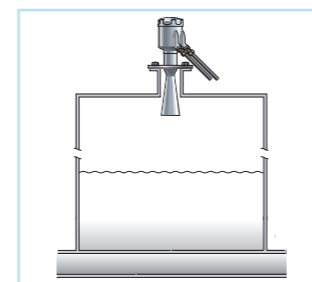
## Centralised Display

TankView software provides centralised indication, alarm and control of all tanks. Repeater displays provide function critical information at additional locations



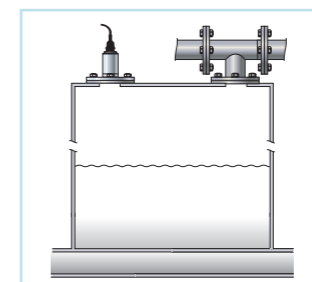
## Cargo tank level or volume measurement

An advanced pulse radar sensor providing high performance with low maintenance needs. Compact design with no intrusive sensor dome ensures simplicity of installation.



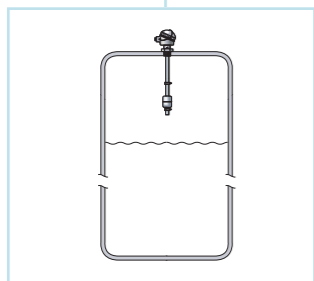
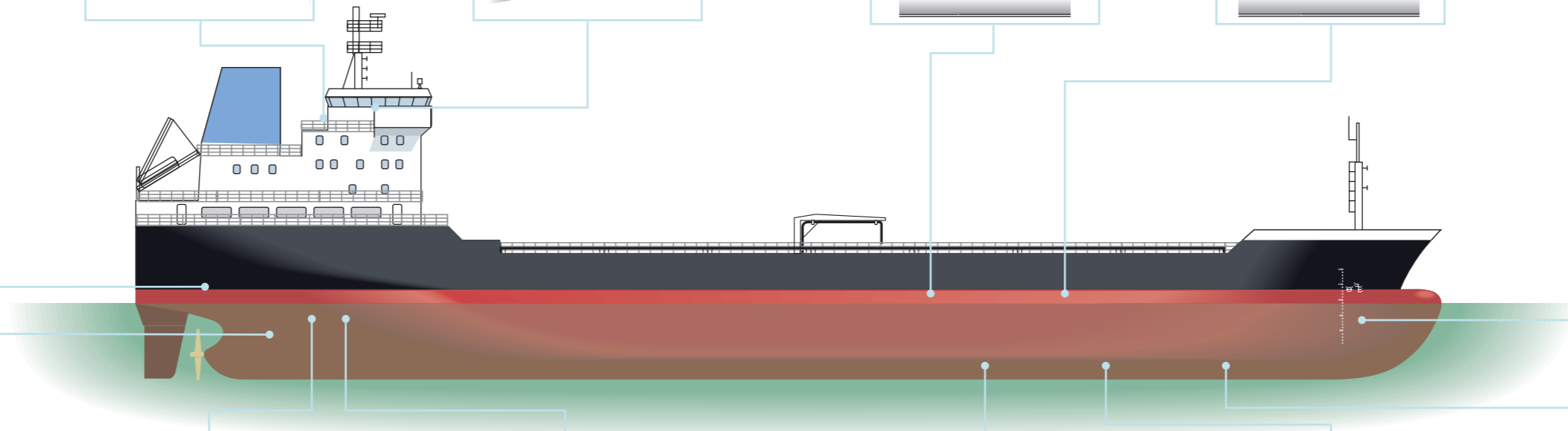
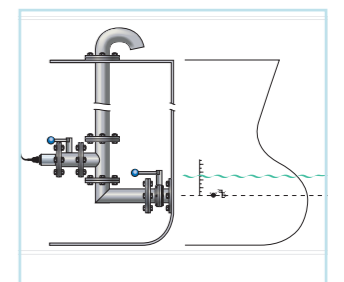
## Cargo tank overpressure and vacuum measurement

ict 1000 with a direct pressure calibration measures the cargo tank inert gas blanket directly or in the vent manifold



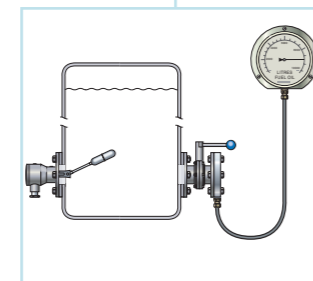
## Ship's draught measurement

ict 1000 level transmitter installed inside a vented draught tube is used to measure the ship's depth in the water



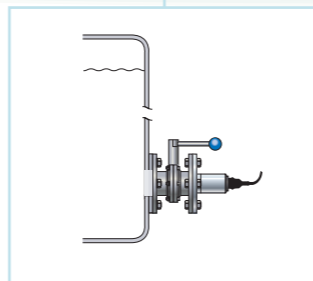
## Overfill protection for waste water / oil storage

KD 30 level switch used to detect a high level condition in bilge and service tanks



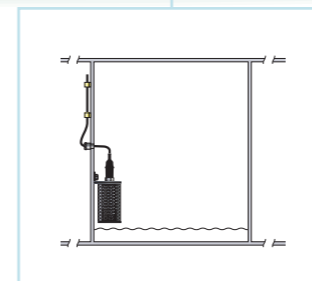
## Day tank fuel oil measurement in engine room

Self-powered HCG contents gauge provides a local continuous indication of tank level with a KD 12 level switch used to detect a low level condition



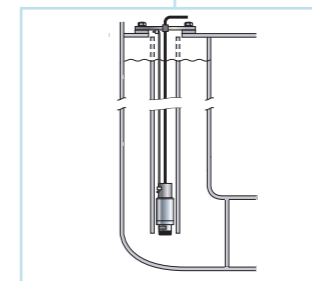
## Bunker fuel oil tank measurement

ict 1000 level transmitter with flange mount installed at the base of the tank via an isolating valve as isolation from potential high temperatures



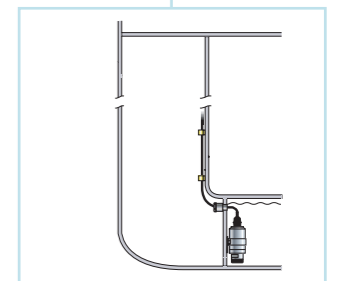
## Level detection in bilges and void spaces

BLS 9200 bilge switches detect the rising level of water or oily waste as part of a pump control or flood detection safety system



## Wing ballast tank measurement

ict 1000 level transmitters are installed at the bottom of a stilling tube with cable exit via a deck penetration flange



## Double-bottom ballast tank measurement

ict 1000 level transmitters are installed using a clamp mount with cable exit via a liquid-tight bulkhead penetration