

LEVELMASTER® WIM

Water Ingress Monitoring

SOLAS XII/12 – Water Ingress Monitoring for Bulk Carriers

Kockum Sonics has supplied marine level technology, known as LEVELMASTER®, for over 30 years and through our customer led commitment to research and development introduced our solution to the SOLAS XII/12 rule.

Our WIM system is based on the LEVELMASTER® CALM a level monitoring system that today is successfully installed on many types of vessels. By utilising accurate electro-pneumatic measurement, no electrical components are located in the holds and one sensing pipe will produce continuous monitoring with compliant alarms. Through this design innovation, installation and operational costs are consequently reduced to a minimum. LEVELMASTER® WIM is type approved by major classification societies: DNV, LRS, ABS and BV.

Easy Installation and Do it Yourself Kit

LEVELMASTER® WIM has been successfully installed and in many cases the crew has carried out the installation by themselves without the need for dry-docking. Kockum Sonics has supplied measurement unit, alarm panels and installation material complete with all necessary fittings.

A new development is a smart 'valve unit adapter' that can be mounted on top of the existing manual sounding pipes. The measurements are performed at the bottom of the bulk hold and the manual sounding will not be hindered.

Ships crew can install the adapter unit without dry-docking or it can even be done with cargo in the hold!

LEVELMASTER® WIM – continuous level indication!



LEVELMASTER® WIM

Each hold, tank or compartment is linked via a single sensing pipe to a central cabinet, the LEVELMASTER® CALM, housing all of the systems' electrical components and hydrostatic sensors alleviating expensive zener barriers and cable junction boxes.

All sensing lines can be made of robust polyamide tubing (stainless steel if required) that is both extremely cost-effective and simple to install and protect. The CALM measurement system has an automatic self-calibrating feature on a 24hour basis ensuring maximum accuracy and there is an automatic air purge function in the unlikely event of solid ingress to the tube. There are no electrical sensors in the cargo holds, just a simple sensing tube, and with the special 'valve unit adapter' any sounding pipe can be used as sensing tube. The air consumption is minimal

Continuous Level Measurement

Because LEVELMASTER® WIM provides real level information it allows the Master to see if an actual scenario is developing or if it is indeed just a false alarm. With limit switch systems an alarm may indicate that there is at least 500mm of water in the hold, but what if there is 1900mm?

Alarms and Options

Our alarm panel DU350 WIM fulfils all of the functions prescribed in the IMO specifications and can be console or bulkhead mounted. Alternatively we can support serial outputs to the ship stability and cargo planning software LOADMASTER®.

Installation

Because there is only one sensing line per hold instead of two limit switches the installation costs of the project are massively reduced. This is enhanced by the price differential between polyamide air pipe and standard marine grade cable especially when calculating requirements to the forward holds, forepeak tank and store etc.

Increased Flexibility

On some vessels it is possible to install sensing tubes in the hold bilge wells and this has many obvious benefits including the option of a bilge level alarm. At Kockum Sonics we have many potential solutions based upon individual vessel designs and we would value the opportunity to discuss our proposals in detail.

