

# ClearView®

.....*Putting you in the Picture*



## What is it?

A complete solution to measuring and recording all onboard Oily Water and Sludge operations, specifically developed to meet a rapidly emerging need.

## Why is it needed?

### Environmental Compliance

With an ever increasing global focus on the environment Ship operators are looking at ways to implement and enhance their environmental compliance programmes (ECP) and Environmental Management Systems (EMS), and to train / support their employees in this critical area.

Under MARPOL 73/78 Resolution MEPC 107(49)\* and APPS\*\* the USCG and other PSC are adopting a zero tolerance approach to owners and operators of ships judged to have made illegal discharges of Oily waste. Multi-million dollar fines and imprisonment are common outcomes. In addition to these direct penalties the Owner faces loss of image, more rigorous future PSC inspections, exclusions, and loss of charter.

*\*IMO Resolution MEPC 107(49) set tighter performance standards to the earlier MEPC 60(33) 15PPM limit for OWS systems, including mandatory installation of a certified bilge alarm or tamperproof Oil Content Monitor (OCM) for recording of OWS operation or flushing.*

*The OWS must be capable of achieving 15 ppm on type C emulsion.*

*\*\* APPS Act to Prevent Pollution at Seas*

Given the above, owners are therefore only too aware that they will be liable for any illegal discharge. It is a difficult problem and there is a need for remote visibility and control of ships activities.

Previously available instrumentation have focussed only on the oil content (PPM) and status of the discharge valve and cannot therefore prevent the wilful bypassing of the OWS system or “Magic Pipe” syndrome, as it has become known. Senior officers may even be unaware of their crews’ actions putting the vessel into jeopardy in this way.

Even where the vessel is fitted with an interlock alarm system linking the PPM monitor to a diverter valve there are many ways in which an “unseen” illegal discharge can occur, and be incorrectly recorded in the ORB.



*ClearView*® presents a new approach and one that has been accepted by the USCG as the most comprehensive solution to emerge.

Based on PSM's well proven Tank Content and valve monitoring package, a much wider range of parameters are able to be monitored. This can include status of all Bilge Wells, Bilge Holding tanks, Sludge / Sludge separator tanks, Dirty Oil tanks, Incinerator status and operation, as well as the normal PPM value and valve status.

By continuously collecting and evaluating data from all elements of the separator/discharge process a pattern of good practice is inviolately logged with every action being recorded with a time, date, and location stamp.

### **Corporate responsibility**

Oil discharge / sheens are now readily detected via satellite imagery. Spotter planes are also employed in many cases. Even so actual evidence of discharge is not required.

USCG for example will prosecute irrespective of the flag state of the Vessel involved and proceed based on the suspicion of falsified records (ORB) alone, there is no requirement for evidence of actual illegal discharge, nor does it matter where it occurred, since it is assumed that it "will" have occurred because there is no evidence of the correct disposal or incineration of sludge that the ship "must" have produced.

*ClearView*®, working in combination with the operators fully implemented ECP / EMS and appropriate onboard training and defined procedures will provide the evidence that the ship operator has taken every possible step against illegal discharge activities.

### **What does it do?**

#### **Automatic monitoring**

*ClearView*® provides the means to automatically monitor, display, and record, all related Engine Room activity and securely deliver this information to the owner / operator.

#### **Safety Interlocks**

*ClearView*® also provides interlock controls that automatically close a valve in the OWS discharge line to prevent overboard discharge unless the treated water is below the legally permitted levels as monitored by the OCM / PPM meter, and only when the vessel is outside of GPS based exclusion zones such as a defined particularly sensitive sea area.

#### **Evidence of correct operation**

*ClearView*® provides the evidence required to ensure ships are being operated in compliance with company MARPOL policies and procedures.

To encourage correct practice onboard, the ships crew are provided with a clear display of the current status of the entire bilge, separator, and incinerator process, and will be aware that all activities are automatically recorded. Any unusual or illogical conditions are immediately flagged, and repeaters /override controls can be fitted in the Bridge.

### **Powerful logic, ship specific solutions**



Alarm conditions are based on real inputs or are derived from a logical combination of input conditions. Design flexibility means ClearView is readily tailored for the specific needs of each application.

### **Immediate warning of critical alarms**

**ClearView**® will also provide real-time warning of “critical” alarm conditions, both on-screen and also, if required, by immediate self-initiated transmission of an alarm message via the included Inmarsat D+ satellite transceiver. This message is received and logged by the Transas central server which then transmits an alarm message on to the owner via email or SMS.

### **Secure records**

Historical data is securely stored in protected and tamperproof non-volatile memory onboard and can be reviewed / presented at PSC inspection in support of the Oil Record Book. Each individual data record has a UTC and GPS stamp based on date provided from the included D+ Satellite transceiver.

### **Simple integration, Remote viewing**

**ClearView**® is designed to operate in conjunction with existing shipboard systems meaning it requires no change to operational procedures and can be installed with the minimum of modification or expense. In most cases it can be integrated into the existing ships satellite communication system for the transmission of logged data to the operators land based offices.

Where it is preferred, PSM, in partnership with Transas Telematics, can provide a complete package using the Transas “Fleetview Online” service. This provides secure archiving and processing of the transmitted data allowing the operator to log in and review it via the internet.

### **Expansion for other uses**

**ClearView**® is not limited in the type or number of parameters it monitors. For example it would be possible to log the ships bunker stocks at user specified intervals, with or without the information also being displayed on the local screen and with exception alarms being generated in the event that the rate of usage exceeds owner defined limits.

This ease of expansion also ensures that the system can readily cover whatever mandatory requirements are eventually entered into regulation.

### **Simple Installation**

Installation of the equipment itself is straightforward and can be done in a few days while the vessel is alongside during normal operation. Installation is normally undertaken by the owners preferred providers against project specific drawings and instructions provided by PSM, but PSM can arrange for this is required.

**ClearView**® is designed to interface with existing monitoring equipment wherever possible. Since no two ships are identical a key aspect is the initial survey / design phase to ensure that the installed solution fully meets both the owners requirements and provides the required records of correct operation.

PSM provide a questionnaire to assist the owner in identifying the current status and offer a low cost survey service if preferred.



Based on information provided at this stage PSM will provide a proposal detailing system costs, including any additional equipment required,

PSM will liaise directly with the manufacturers of OWS and incinerator systems to identify any upgrades and costs associated with providing the required signals.

*ClearView*® is a split architecture system allowing the signal marshalling panel(s) and system display to be optimally positioned to minimise cabling and maximise usability. Wiring is minimal, making use of Serial communication between marshalling panel and displays.

Where required parameters are not already monitored PSM has a full range of type approved instruments available for bilge and tank level, discharge flow etc., and can supply suitable diverter valves for discharge control.

Once the system is installed PSM or our qualified Agents will test and commission all aspects. Depending upon the method of data recording / display chosen this will involve the owner or their Satellite services provider in ensuring the onboard records are securely delivered. Where the Transas Telematics solution is adopted PSM will liaise direct with them to deliver a complete solution.

## **Applicability**

### **Do I need it on my Ship?**

Current IMO MARPOL regulations are applicable to all ocean going vessels. *ClearView*, in conjunction with the mandatory OWS and OCM system will provide the increased assurance the owner needs and peace of mind that all activities are logged, illegal discharge is prevented, and MARPOL compliance delivered.

*Current IMO rules require all tankers above 10,000 gt to be equipped with a drainage OWS system constructed to Class 1, and to be capable of providing a 15 milligram per litre differentiation. The vessel must additionally be provided with a discharged water oil content monitor and alarms, a sludge storage tank and piping and an automatic discharge stop device.*



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