

ODME

IMO compliant Oil Discharge Monitoring Equipment



MARINE

When down-time is not an option



Oil Discharge Monitoring Equipment (ODME) is a requirement made to safeguard the maritime environment – lack of compliance leads to immediate grounding resulting in heavy fines and delays. Avoid unnecessary costs – choose a reliable ODME supplier.

Sailing with an active ODME is required by regulations developed by IMO's Marine Environments Protection Committee (MEPC) and adopted by most countries. The regulations have been developed and implemented as a result of the 70'ies heavy oil spills and contamination of the maritime environment.

As technology has evolved so have the regulations. Starting with a purely mechanical requirement and manual logging, it now stipulates automated monitoring of oil content. Furthermore the regulation requires spare parts, recommended by the manufacturer, have to be carried onboard, as well as control and logging of speed and data (2005).

The latest amendment to the regulations concerns bio fuel. From the 1st of January 2016, ships intending to –

Sailing with a malfunctioning ODME can result in costly discharge to land, grounding, heavy fines, or jail time. As your supplier we ensure you avoid unnecessary costs.



or carrying – bio fuel must have an ODME system certified to handle 5 different bio fuel blends. In the near future additional fuel mixtures may be added to the approval list.

The regulation from MARPOL states, that no vessel carrying oil, oil-like substances or chemicals, may discharge more than the following limits, and only so if en route outside of special areas:

- 30 liters of oil per nautical mile
- An accumulated volume exceeding 1/30,000 of the total volume of previous journey's cargo

The consequences of non-compliance

Since the ODME is an onboard requirement, the threat of detention is very real – a threat that could end up resulting in delays and unplanned extra cost for the operator.

Intentional or unintentional compliance often reaches astounding penalty amounts from several thousands to millions of \$. Negligence can also lead to probations, and if made public will typically result in increased scrutiny and governmental check-ups in ports. In some cases it has led to jail time for the offending crew.

The main ODME regulation

- ODME obligatory installation. *MARPOL 73/78 Annex I, regulation 15.*
- Mandatory inclusion of vessel's real time position for ODME installed after 2005. *Resolution MEPC.108(49).*
- Manufacturer recommended spares should be carried to ensure operation. *Resolution MEPC.240(65).*
- The ODME must be certified for Bio fuels in order for vessels to carry them, 2016. *Resolution MEPC.240(65).*

How it works

We offer certified ODME solutions and installations that meet and exceed regulations – including the latest amendments to MEPC MARPOL’s requirements for monitoring and controlling of ballast water.

ODME functioning

The ODME principle is based on a measurement of oil content in the ballast water, which is held up against the regulations and requirements. By data interpretation of an automated process, either allows or prevents discharge of ballast water. A sample point on the discharge line allows the analyzer to determine the oil content of the ballast water in PPM. The analyzer is self-maintained by periodical cleansings with fresh water, and therefore requires a minimum of active maintenance from the crew.

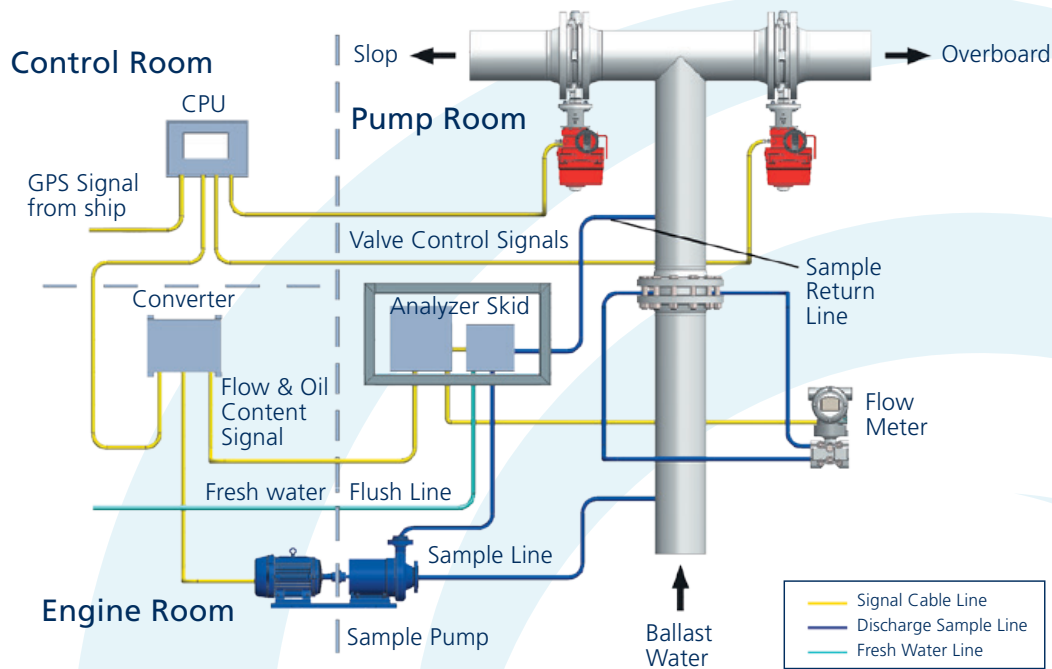
The results of the analyzer are sent to a computer, which determines whether the oil content values are to result in overboard discharge or not. The valves that direct the ballast water either over board or to the slop tank are controlled by the integrated computer. A GPS signal further automates the process by including special areas and completes the required input for the Oil Record Book.

Type approval certificates for our ODME systems

The ODME systems offered by Insatech Marine are equipped and operational according to IMO MARPOL. It means the ODME system is supplied with type approval certificates and the MEPC specified spare parts list. It is to safeguard the ODME from regular wear and tear and in the unlikely event of a breakdown.

The spare parts are delivered when the new ODME is installed, together with consumables for planned maintenance.





Overview of an ODME setup (example)

Sample point

The point where the discharge water sample is taken for analysis.

Sample pump

The sample pump pumps the sample from discharge line to the analyzer.

Sample return

After analysis, the sample is returned to the discharge line and either sent overboard or to the slop tank.

Oil content meter

By turbidity the oil content of the discharge sample is found.

Fresh water flush line

In order to keep minimum maintenance, fresh water is used to flush and clean the oil content meter.

Conversion unit

Gathers and distributes signals.

Computer unit

The computing unit is the brain of the operation, where signals are processed and the control of the valves is carried out, as well as all logging of input from oil content meter, dP transmitter and GPS.

Overboard discharge valve

If the input values from the ODME are according to regulation, the overboard valve will allow overboard discharge.

Slop tank valve

If the oil content is too high, the ballast water will be sent to the slop tank through this valve.

GPS signal

The GPS signal will mainly be used for logging, in order for inspectors to control if any overboard discharge within special areas has taken place.

Installation and comprehensive support

Our technicians are ready for installation and service on board your vessel at all times.

Insatech Marine provides a total package ensuring your operation: We install, service and calibrate the ODME based on your wishes at your preferred destination. With a service program we will make sure you are always IMO compliant.

No matter how good your equipment is, it is not worth much, if it has not been installed correctly, malfunctions or the crew lacks training in its daily operational use. At Insatech Marine we ease the operator's job by applying our maintenance and service expertise to ODME systems. This way we free hands onboard, and make cost on maintenance easier to foresee and budget. Furthermore, we offer to manage and maintain both spare parts stock and certificates of the ODME system, in order to ensure continuous compliance.

Stay IMO compliant

Our comprehensive and flexible service program and plan is customized to your specific needs, and ensures constant compliance. Choose whether to let us take care of installation, service, certificates and spare parts, to always secure optimal monitoring and maintenance of the ODME installation, as well as ensure IMO compliance at all times. Or if you want to manage parts of the maintenance yourself the service plan will be made based on what each party is responsible for. The complete service package will release a discount on all future retrofits and larger operations on the ODME system.

Remember to calibrate

ODME requires an annual check and calibration each 5 years to ensure the system is IMO compliant. While we can conduct the mandatory calibration at your preferred destination or between routes, we are located in Denmark. Thus if you happen to pass through Danish waters completing a calibration at sea while reducing travel time will minimize both down time and service costs.

Our ODME services offers:

- On-site, onboard installation of equipment
- Commissioning
- Training of crew in daily operations
- Retrofitting of new systems
- Preventive maintenance
- Repairs and replacements
- Calibration
- On call service technicians
- Spare part stock of all components
- Management of onboard spare parts
- Management of spare parts development and updates
- Certificate management and monitoring
- Remote support

Our total package ensures your operation ►



Installation



Service



Spare Parts



Certificate

What we do

Below is a short recap of our different solutions. Our performance concept can be entered at your preferred stage depending on the level of insight and sophistication wanted, or we can help you with bunker systems. All systems can be delivered as turnkey solutions.

Fuel Consumption System

In addition to real-time fuel consumption the system enables logging of fuel consumption data. Historical views and over time developed trend lines provides you with a better analysis of performance and effect of new initiatives. Furthermore, the Fuel Consumption System is ready for upgrade to a Performance Monitoring System and/or addition of an on board database synchronizing with another at the head-quarter.

Performance Monitoring System

The system provides an overview of the ships, performance based on direct on-line measurements. It is versatile and can be customized according to any measurements that you would like to monitor. Fuel consumption is measured with high accuracy mass flow meters, together with propeller shaft torque and rpm. For generators a power meter will be installed, and motion sensors are used to indicate weather conditions. This gives valuable information about fuel consumption, but also KPI values (Key Performance Indicator) as g/kWh & g/Nm.

Performance Management System

When fully developed it will become an upgraded version of the Performance Monitoring System and complete the on board management layer of the performance concept. It is decision making oriented and an open input based concept,

where more factors are taken into account when evaluating the ships performance. All factors taken into the system are converted into KPIs. The crew will experience a tool that effectively allows them to contribute to a more cost effective operation.

Fleet Viewer

When fully developed it will become a system for visualizing and creating overview of fleet performance. It enables comparisons, voyage statistics, KPI generation via consumption, performance and maintenance planning. As such it is a tool for the headquarter to plan, optimize and manage the fleet. The system is built on top of the Performance Monitoring System.

Bunker Management System

Is a Coriolis Mass Flow Meter-based Bunker Management System with a highly accurate and volume insensitive measurement of transferred bunker. The system ensures an efficient bunker operation and is a pro-active tool to ensure you get the amount of bunker you pay for.





***Passing through Danish waters?
Have your annual check or 5 year
calibration done without interrupting
your schedule.***

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brochure

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