IMO compliance monitoring and control equipment for ballast discharge
Including the latest amendments to MEPC MARPOL’s requirements for monitoring and controlling ballast water, Insatech Marine offers complete solutions and installations which meet and exceed future implementations into the regulations.

Insatech’s continuous strive for viable and ideal solutions within automation and instrumentation, has for some time now allowed us to gather valuable experience and understanding of the requirements regarding ODME systems. We offer field tested and proven solutions for all requirements towards the maritime industry, and for all vessels that are obliged by MEPC to have ODME equipped.

Type approval certificates for all Insatech Marine ODME systems

Naturally the ODME systems offered by Insatech Marine are equipped and operational according to IMO MARPOL and comes with type approval certificates. In order to safeguard in case of an unlikely breakdown of any parts within the ODME, Insatech Marine also deliver the MEPC specified spare parts list with the new installation to carry onboard, as well as any spare parts for planned maintenance, preventing break downs from normal usage and wear.

Other certificates found available on request on vaf.nl
As always, no matter how good your equipment is, it is not worth much if it has not been installed correctly, is malfunctioning or the crew has not been trained properly in daily operational requirements. And since the ODME is a required system onboard, the threat of detention is very real – a threat that could end up resulting in delays and unplanned extra cost for the operator.

At Insatech Marine, we know how much effort it requires to maintain the equipment onboard as well as manage the man-hours it takes to carry it out, and we would like to take our part of the responsibility in making this task a bit easier. This is why we offer our comprehensive service program on the ODME, and thereby we can actively make operators job a little easier. This way Insatech Marine can help to free hands onboard, as well as make cost on maintenance easier to foresee and budget.

Furthermore, Insatech Marine offers to manage and maintain both spare parts stock and certificates of the ODME system, in order to ensure that the installation is never non-compliant.

**Insatech Marine services offer:**
- On-site, onboard installation of equipment
- Commissioning
- Training of crew in daily operations
- Retrofitting of new systems to replace outdated installations
- Preventive maintenance
- Repairs and replacements
- Calibration
- On call service technicians for special requirements
- Spare part stock of all components
- Management of onboard spare parts
- Management of spare parts development and updates
- Certificate management and monitoring
- Remote support

*The IMO compliance jigsaw*
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 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-maintaining by periodical cleanings 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 slop tank are of course controlled by the integrated computer, and a GPS signal further automates the process by including special areas and completes the required input for the Oil Record Book.

Custom made cabinet for deck installation.
**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 slop

**Oil content meter**
By turbidity the oil content of the discharge sample is found

**Fresh water flush line**
In order to keep maintenance to a minimum, 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 for discharge overboard

**Slop tank valve**
Should the oil content be 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
Because it is required by regulations developed by IMO’s MEPC and adopted by most countries. The regulations have been developed and implemented as a result of some of the worst shipping wrecks during the 70's causing heavy oil spills and contamination of the maritime environment. As the technology has evolved so have the regulations. Starting with a purely mechanical requirement and manual logging, it now stipulates automated monitoring of oil content, control and logging of speed and data. For instance, all ODME systems installed after January 1st 2005 must utilize ships speed and position in the logging and all hardware and spare parts that are recommended by the manufacturer, should be carried onboard. The latest amendment to the regulations concerns bio fuel. By January 1st 2016, ships carrying bio fuel must have ODME systems certified to handle just this, as the oil content meter must be able to handle these substances.

• ODME obligatory installation  
  MARPOL 73/78 Annex I, regulation 15

• Ships real time position inclusion mandatory for ODME installed after 2005  
  Resolution MEPC.108(49)

• Manufacturer recommended spares should be carried to ensure operation  
  Resolution MEPC.240(65)

• By January 1st 2016, ODME must be certified for Bio fuels in order for vessel to carry them  
  Resolution MEPC.240(65)

The basic regulation from MARPOL states, that no vessel carrying oil or oil-like substances and 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
In short; no matter what your needs might be for an ODME system, it is certain that Insatech Marine will be able to fulfill your needs. The solutions developed and delivered by Insatech Marine are based on a desire to provide reliable and functional installations, and we wish to have long-lasting mutually respectful relationships with our customers – all to add value to operators, owners and Insatech Marine.

The Insatech Marine IMO compliance jigsaw

Our comprehensive – and yet flexible – service program, allows operators to customize a service plan to their specific needs, based on the four categories: Installation, Service, Certificates and Spare Parts. By choosing all four pieces of the puzzle, Insatech Marine will provide optimal monitoring and maintenance of the ODME installation, as well as ensure IMO compliance at all times. At the same time, having chosen the complete package will release a discount on all future retrofits and larger operations on the ODME system.
Insatech A/S was established in 1989, and has, over the years, had a positive business development; today we are more than 70 employees, and are considered one of the market leaders.

We are based in Vordingborg in the south of Zealand, Denmark in an old historic building.

Since December 2005 we are part of the Addtech Group of companies – Addtech AB, Stockholm.

As a result of our longstanding partnership with some of the world’s leading manufacturers within instrumentation and automation, we are able to provide a global service.

We supply quality products, solutions and services in the fields of measurement, control and calibration to nearly all industrial segments, as well as utilities, and we work as a professional partner for our suppliers and for our customers – we believe in long term relationships.

Our main markets are in the Pharmaceutical, Food, Energy, Marine/Oil & Gas Industry, which means we have a strong knowledge of the special applications, as well as the requirements for documentation in these areas.

Our main business areas:

- Process instrumentation and calibration equipment
- Automation, control and data acquisition
- System design, engineering and validation (DCS and Safety Systems)
- Service/maintenance and calibration (ISO 17025 accreditation)
- Site surveys and evaluation of process optimization based on better control practices
- Marine- and ship solutions, Cargo Management Systems
- Project Management
- Flow rigs / calibration rigs
- Special fittings
- Product enhancements
- Wireless solutions for monitoring and control
- Complete solutions including panels and commissioning
- Seminars and training.