



# Our Comm

**KITTIWAKE**  
HELLAS S.A.  
monitoring innovation

Newsletter #103 • December 1, 2010 • Kittiwake Hellas • Your Partner in Next Generation Reliability Centered Maintenance

## Now Fuel and Lube Oil Analysis Made Easy

Fuel and lubricating oil form a major cost element in the operation of almost all industrial machinery and engines; the quality must be closely monitored to protect the investment.

The ability to test on-site, at the point of use, enables engineers and facilities managers to conduct oil analysis quickly and easily. Detecting out-of-spec fuels or lubricants can identify potential problems before equipment damage occurs.



Kittiwake supplies two styles of Onsite Oil Analysis Suite. Oil test centers come in metal or industrial roller cages for portability, while Fuel and Lube test cabinets are designed for wall mounting on-site. It is manufactured under strict ISO 9001:2000 quality standards enduring consistent and accurate test results. Rugged design and suitable for long term use in harsh environments, the equipment is simple to use and ideal for operation by non-technical personnel.



The Oil Test Center allows quick and easy analysis of Fuel and Lubricants by using the following tests:

- Water in Oil
- TBN
- Insolubles
- TAN
- Density
- Compatibility (*as per ASTM D4740*)
- Viscosity (heated or unheated)
- Salt/Fresh water
- Pour Point

Also available as an option:

- Cloud Point Detector
- Flash Point Detector

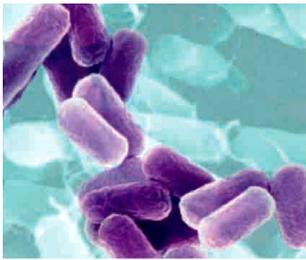
Kittiwake Prod# FG-K4-120-KW-XY

## Sewage effluent testing Why waste time and money?

As environmental pressure mounts, performance testing of sewage treatment systems is likely to become a requirement for entry into many ports, especially those in areas with sensitive eco-systems. Martin Lucas, managing director of Kittiwake managing director, explores how regular testing can, not only safeguard against environmental deficiencies, but also save money by avoiding costly port delays.

As an inherently global industry, the opportunities for shipping are borderless. The same cannot, however, be said for regulation, which – although perhaps a necessary evil – is always going to present challenges.

With flag state and port state control requirements potentially differing, it is critical that MARPOL regulations are properly understood monitored and adhered to.



Deliberate violation of MARPOL requirements or deliberate falsification of records can result in both company management and seafarers being liable

for criminal prosecution, large fines and possibly even imprisonment. But even if certification is up-to-date, original and valid, deficiencies found by Port State Control Officers are many and varied, so measures that reassure compliance and lessen the risk of prosecution and delay are surely to be sought out and welcomed.

As we are all only too aware, the environment is now top of the agenda with associated guidelines and regulations steering the shipping industry to a cleaner, greener future. One such motivator is the resolution MEPC.115 (51) revision of MARPOL's Annex IV which came into force on 27 September 2008, regulating the environmental impact of ocean going vessels and specifying performance criteria of onboard sewage effluent treatment systems.

New and existing ships engaged in international voyages, which are of 400gt and above, or are certified to carry more than 15 people, must have a Sewage Pollution Prevention Certificate before they can sail. To obtain this, a survey must be completed by the port/flag state and the sewage system on board must conform to certain performance test criteria, including C.O.D., E.coli and pH.

This certificate is valid for five years, so -perhaps understandably- there is still certain inertia to regular testing between certificates. However this could prove to be false economy. In line with Annex IV Prevention of Pollution by Sewage from Ships, Sewage treatment plants should be kept in good condition, properly maintained, fully functional, with appropriate spaces.

Escalating environmental concern for oceans with sensitive ecosystems has led to the introduction of additional performance testing of sewage treatment systems, which constitute a pre-qualifier to port entry.

This is already the case in Alaska and Canada, and as environmental pressure mounts, testing is likely to become a requirement for entry into many ports. A port authority can instruct a

survey of the system at any time if the system is shown not to substantially comply- that is to perform to type approval – then the vessel can be held in port until repairs are completed (Regulation 4(5)).

It goes without saying that detention and associated unscheduled delay incurs significant costs, so a growing number of vessels are monitoring the quality of discharges from the sewage treatment plant to ensure that any problems are spotted and can be certified at an early stage. Proactively testing sewage effluent using a product such as Kittiwake's sewage influent test kit enables ships engineers to rapidly assess the performance of on board treatment systems and demonstrate to port authorities that the effluent discharge is within the consent levels detailed in the MARPOL regulations. The test kit adheres to EPA approved methodologies enumerating C.O.D. and Coliforms/E. Coli and measures pH value and TSS.

While striving to reduce environmental impact has become central to the modern shipping operation, it would be naïve to pretend that this is a purely philanthropic exercise. The most effective initiatives are those that tick all the boxes; improving carbon footprint whilst simultaneously satisfying commercial demands. Avoiding waste and generating more from less inherently benefits profit, so these are worthwhile investments that will prove popular with the green lobby and shareholders alike. Happily, many environmental initiatives have a direct correlation with uptime and therefore revenue. Increasing operational profitability through preventative maintenance of critical equipment minimizes repair costs and delays, and monitoring and alarm systems are the first means of defense in diagnosing problems with the ship.

Condition monitoring tools and technology enable fast and informed decisions, which prolong the life of assets, negate the considerable costs and inconvenience associated with unscheduled delays, as well as supporting environmental commitments. So although at first sewage effluent testing may not seem the 'sexiest' of topics, as the benefits reveal themselves, it somehow becomes increasingly alluring. ☺

[Kittiwake Prod# FG-K28418-KW - Sewage Effluent Test Cabinet](#)