

## **New era dawns for discharge monitors**

**The IMO regime governing oil discharge monitoring equipment (ODME) has been further tightened. The new requirements are set to have an impact on both tanker operators and equipment suppliers**

At its 49th Session in July 2003 IMO's Marine Environment Protection Committee (MEPC 49) agreed to the proposed revision of the requirements governing oil discharge monitoring equipment (ODME) specifications.

The Committee approved MEPC Resolution 60(33) incorporating revised guidelines and specifications for pollution control equipment for machinery space bilges of ships and MEPC Resolution 108(49) incorporating revised guidelines and specifications for oil discharge monitoring and control systems for oil tankers. These are due to enter into force on January 1, 2005. The current requirements for oil discharge monitoring and control systems for oil tankers are laid down in IMO Resolution A.586(14).

The aim of this revision work has been to improve the operation and maintenance of such equipment and to facilitate the proper completion of entries into the ship's Oil Record Book as a result of the operation of ODME. Also, under the new requirements the ship's ODME and navigational capabilities, including global positioning systems (GPS), will be linked to provide information on the precise location where controlled discharges of oily water mixtures are being carried out and on the ship speed at the time of this operation.

The paragraphs below detail the latest developments from amongst the leading suppliers of oil discharge monitoring equipment as they prepare to meet the new requirements.

### **New from Rivertrace**

Rivertrace Engineering Ltd of the UK reports that ODME sales so far in 2003 are about 20 per cent down levels achieved over the same period in 2002, primarily because its existing OCD 10M tanker deballasting (dirty water) unit cannot compete with alternative equipment on price.

"In response, we are developing a monitor to replace OCD 10M which will be launched to tie in with the entry-into-force of the new IMO regulations," states Mark Beavis, the Rivertrace sales manager. "The use of new, improved technology in the replacement unit will ensure improved performance at lower cost, not least through a reduced requirement for maintenance over the unit's working life."

Ballast monitoring equipment accounts for about 10 per cent of turnover at Rivertrace. In addition to OCD 10M, the company also provides its segregated ballast monitoring systems (SBMS), the latter equipment meeting an IMO requirement for the monitoring of segregated ballast on tankers to prevent accidental oil spills due to the corrosion of ballast pipes passing through cargo tanks.

The UK company also supplies bilge water monitoring units which are branded OCD CM. These 15 parts per million (ppm) oil content monitors, which are utilised on all types of ships, not just tankers, are built to meet the requirements laid down in MEPC 60(33).

"Sales of OCD CM account for 45 per cent of the turnover at Rivertrace, making it the leading product line," points out Mark Beavis. "However, with the introduction of our new ODME planned to coincide with the January 1, 2005 introduction of the new IMO requirements, we expect to see a dramatic upturn in our ballast monitoring equipment sales over the next few years."

### **R&D spend**

As part of efforts to produce the new ODME device, Rivertrace Engineering has doubled the size of its development team. The work has involved a major redesign of

every component in the system and utilisation of a new sample flow measurement principle based on temperature differential.

The patent-pending technology uses microcontroller-based and intrinsically safe measuring cells to relay the parts per million (ppm) reading back to the computing unit. Because only an electrical connection is required, there is no need for a separate monitor in the engine room. In addition, there are relatively few system components, reducing cost and installation time and complexity.

"Our new system exceeds the IMO requirements laid down in MEPC.108(49) by fully discriminating against the solids and iron oxide within the sample," explains Mark Beavis. "It is also possible to remotely interrogate the shipboard system from anywhere in the world."

### **Viking retrofits**

Viking Engineering Pte Ltd of Singapore markets the Marpoil ODME and reports that sales so far this year are 10-20 per cent ahead of levels achieved during the same period a year ago. "This progress is mainly due to our success in gaining contracts for the retrofit of Marpoil devices on tankers previously fitted with ODME for which technical support or spare parts are not now readily available," says Mr B S Wong, Viking sales manager.

Viking Engineering has worked over the past year to extend the capability of the Marpoil device in monitoring oil-like noxious liquid substances listed in Annex II to the Marine Pollution (MARPOL) Convention. The equipment can now be programmed to monitor for a wide range of Annex I oil and Annex II chemical cargoes.

The Marpoil device accounts for approximately 12 per cent of turnover at Viking Engineering. The company maintains a full stock of spares with its global network of service representatives to ensure quick response to customer requests.

### **Oilcons from VAF**

VAF Instruments of Dordrecht, outside Rotterdam, markets its Oilcon Mark 6 oil discharge monitoring and control systems, based on a patented multiple scattering measurement technique, for the continuous online monitoring of discharge water during tanker deballasting operations. The Oilcon ODME is one of four different product lines available from VAF, all of which encompass monitoring and control equipment for the maritime and process industries and all of which are of equal importance as business streams.

"We have been successful this year in increasing our market share with the new Oilcon Mark 6, the latest generation of our ODME technology," states Mr L Blankenstein, managing director at VAF. "The accelerated phaseout programme for older, single-hull tankers and the healthy level of tanker newbuilding have increased the newbuilding part of our orderbook relative to the number of orders for retrofits."

### **Jowa repeats success**

Jowa AB in Kallerud outside Gothenburg reports that 2003 to date has been a good year for the company as regards sales of its Cleantoil 9000 oil discharge monitor.

"We expect to sell about 200 such units this year which is slightly up on what we achieved in 2002, itself was a good year," points out Peter Ericsson, sales manager at Jowa AB.

"Our 2003 orderbook is comprised of both newbuilding and retrofit projects. For new ships, we are already the leading supplier of ODME in Japan and China, while in Korea we are building our market share up from scratch, having returned to that country only recently after a hiatus of about a decade. Turkey and Croatia are also good tanker newbuilding markets for us."

Jowa AB has placed particular emphasis on gaining acceptance for its Cleantoil 9000 equipment in the chemical and product tanker sectors. A measure of the success achieved in the sophisticated chemical parcel tanker market, for example, is given by

the fact that the company includes both Stolt-Nielsen and Odfjell amongst its major customers. Those parts of the panel and wall-mounted computers used on chemical tankers and in contact with cargoes are fabricated of stainless steel. Various special grades of such steel can be used to suit different chemical compatibility ranges. Jowa AB derives about 25 per cent of its revenues from oil content monitoring equipment. The company believes that its high level of after sales service will stand it in good stead as the newly revised IMO requirements for ODME place greater demands on a good service organisation.

### **New generation ready**

Like all suppliers of ODME equipment, Jowa AB is preparing to introduce a new generation of equipment that will be in compliance with the revised IMO requirements due to enter into force in January 2005. The successor to Cleantool 9000 will be available in 2004.

"We are also happy with the way the new IMO requirements for bilge water systems tackle the problem of emulsions in bilge water," comments Peter Ericsson. "We have already developed the technology to meet this requirement and will be seeking the necessary approval for our new equipment in the coming months.

"However, we would have expected the revision of the bilge water requirements to go further and stipulate a lower ppm threshold content than 15 ppm. The technology to lower this limit to 5 ppm exists already. In our opinion the 15 ppm limit is too high.

"As regards ODME, the new IMO requirements do not necessitate so many changes. We believe that the need to integrate the monitor with a GPS signal is a positive development that will help in the control of the operational pollution problem.

Hopefully, this provision will make it easier to identify and catch the tankers that deliberately flout the regulations with overboard discharges that exceed permitted levels.

"Our goal is to provide simple, foolproof, reliable systems that are easy to operate," concludes Peter Ericsson. "In general terms, previous generations of ODME systems have been relatively complex to operate. With recent advances in electronics technology, it is now possible for our industry to supply simple yet efficient ODME systems in a very compact format."