

▶ Peace of mind

Monitoring of liquid cargo is in safe hands

Meet us in Hall A1
Stand 513

International trade fair
7 - 10 Sept. 2010



SMM



Cargo tank monitoring

CARGOMASTER® is the complete solution for tank monitoring and alarm. Combined with the high precision cargo tank level radar OPTIWAVE 8300 C, CARGOMASTER® offers unique benefits for tanker operators.



Fuel consumption monitoring

EcoMATE® offers reliable and accurate fuel consumption monitoring. Combined with our coriolis mass flowmeters, EcoMATE® offers robust and maintenance free solutions for all fuel systems.

KROHNE
Skarpenord

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*Come see us at SMM and let us show you how
the CARGOMASTER® tank monitoring system
can bring easiness to your daily work!*



Major shipping companies are choosing CARGOMASTER®

CARGOMASTER® is the complete solution for tank monitoring and alarm. The system can combine readings from all tanks onboard into modern and easy-to-use software running on marine computers, combined with our high precision cargo tank level radar OPTIWAVE 8300 C, CARGOMASTER® offers unique benefits for tanker operators.

Being in the marine business for more than 5 decades, we have gained extensive knowledge regarding what it takes to deliver high quality products to demanding ship operators and yards. Our reference list consist of more than 700 tailored systems and is the proof of our ability to deliver reliable solutions.



▶ Latest references

Owner	Yard	Type of vessel	Class
Major Middle East Shipowner	Dalian Shipyard	6 x VLCC	DNV
Major Middle East Shipowner	Shanghai WaiGaoQiao	6 x VLCC	LRS
Stolt Tankers BV	Retrofit	3 x Chemical Tanker, IMO II	LRS
Herning Shipping	Retrofit	2 x Chemical Tanker, IMO II	BV
United Arab Chemical Carriers	SLS Shipbuilding	10 x Chemical Tanker, IMO II / III	DNV
Novoship	Jiangsu Rongsheng	6 x Crude Oil Tanker	LRS
Interorient Navigation	Jiangsu Rongsheng	4 x Crude Oil Tanker	DNV
Bourbon Offshore Norway	Zhejiang Shipbuilding	4 x Supply Ship	DNV
OSG (Overseas Shipholding)	SPP Plant & Shipbuilding	6 x Crude Oil Tanker, IMO II	ABS
Erria Tankers	Rushan City Shipbuilding	3 x Chemical Tanker, IMO II	GL
Herning Shipping	Nantong Mingde	2 x Chemical Tanker, IMO II	BV
Odfjell SE	Chuan Dong Shipyard	6 x Chemical Tanker, IMO II	DNV
Dynacom Tankers	Hyundai Heavy Industries	2 x VLCC	ABS
Tankerska Plovidba	SPP Plant & Shipbuilding	2 x Chemical Tanker, IMO II	BV
Leros Management	Dae Sun Shipbuilding	6 x Bulk Carrier	ABS
CPC Corp. Taiwan	Jong Shyn Shipbuilding	1 x Chemical Tanker, IMO II	CR

New projects August 2010:

Major Middle East Shipowner chose CARGOMASTER® for 12 High Spec VLCC's
6 of the ships will be built at Dalian Shipyard and 6 at Shanghai WaiGaoQiao Shipyard. The CARGOMASTER® systems will monitor 17 cargo tanks as well as all other tanks onboard. Deliveries will be in 2011 / 2012.

Stolt Nielsen ordered OPTIWAVEs on 3rd chemical tanker

Stolt needed to lift the accuracy for measured ullage on the Stolt Gannet and decided to install OPTIWAVE cargo level radars. 13 OPTIWAVEs will be installed by the ship's crew and connected to the existing system.

Read more at www.krohne-skarpenord.com



► Bring easiness to your daily work

Our intuitive and dedicated monitoring system CARGOMASTER®, provides you a good overview during your daily loading and discharge operations. The system is well proven and is installed on all kinds of vessels, from the smallest product tankers to the most complex chemical tankers and VLCCs. CARGOMASTER® integrates to loading computers, Engine Automation Systems and Vessel Management Systems.

Our cargo level radar, the OPTIWAVE 8300 C Marine, is unbeaten when it comes to redundant indication, closed tank cleaning and closed tank service.

With these 3 operational benefits, the OPTIWAVE will save operational costs in various critical situations as well as save hazzle during daily routines.

Technical data OPTIWAVE 8300 C Marine

Operating mode	FMCW 24 GHz
Measuring range	0...40 m
Accuracy	2mm / 0,01%
Beam angle	± 5°
Local display	Graphical LCD w/touch screen
Ex approvals	Intrinsically safe (Atex / IEC)
IACS approvals	DNV ABS GL LR BV CCS NK RINA KR



Reliability in cargo operations

The OPTIWAVE grants redundancy on tank monitoring

Even in a worst case scenario where a central component in the monitoring system fails, you will always be able to see the ullage on the OPTIWAVE level radar on deck. The OPTIWAVE calculates and displays all level data locally before transmitting to CCR.



Convenient cleaning facility

Thorough cleaning of the radar antenna - when carrying contaminating cargoes

Opening the cargo tank in a safe and approved way requires cleaning and venting of the tank for many hours. The OPTIWAVE radar antenna may be cleaned with closed tank, which saves time and efforts and protects ship's crew from being exposed to cargo vapours.



Easy service for the level radar

Replacement of radar can be done by ship's crew

The OPTIWAVE radar is a robust piece of equipment, but even with state of the art equipment things may go wrong and most certainly at the most unwanted time. It is good to know that the complete calibrated part can be replaced with closed tank.



► Gain control of your fuel consumption



EcoMATE® fuel consumption monitoring system

The EcoMATE® is an easy-to-use, reliable and accurate fuel consumption monitoring system. Combined with our coriolis mass flowmeters, EcoMATE® offers robust and maintenance free solutions for all applications. With basis in accurate measurements, you may save fuel on optimizing your speed/consumption ratio. Enhanced consumption logs will provide you the needed overview.

Come see us at SMM and let us show you how the EcoMATE® can help you gain control of your fuel consumption!



Fuel consumption monitoring

For main engines and other consumers onboard



Loading verification

For load and discharge line monitoring



Bunkering control

Verify quantity and quality of bunker received

► World wide network of support

KROHNE Skarpenord's main office and production factory is located in Brevik, Norway. From here we are supporting a wide network of sales representatives, service companies and joint ventures, all well secured within the main shipping hubs and shipbuilding countries.



KROHNE
Skarpenord

Stromtangveien 21
NO-3950 Brevik, NORWAY
Tel.: +47 35 56 12 20
Fax: +47 35 56 12 21
support@krohne.no
www.krohne-skarpenord.com