

WILH. WILHELMSSEN HOLDING ASA

Environmental report 2011



LOOKING AHEAD OF LEGISLATION

Our environmental commitment

For the Wilh. Wilhelmsen group, economic, environmental and social responsibilities go hand in hand. Sustainability is therefore the basic principle governing our business operations. We are committed to deliver both environmentally sustainable solutions to world shipping and reducing the environmental impact of our operations.

Our vision is “Shaping the maritime industry”. In order to be that shaper we take into account customer demands, international regulations and future technology. Through profitability and innovation we are committed to address the environmental challenges of the maritime industry. We have a clear ambition to develop, produce and market environmental products and services to the global merchant fleet. In addition, we can contribute to making the industry greener by operating our vessels in an energy efficient and environmentally sound way. Our vessels also function as test bed for our environmental products and solutions.

We believe accidents and environmental harm can be prevented through focus on quality and safety standards. All companies within the group comply with and aspire to stay ahead of international laws and regulations and have established procedures for monitoring environmental performance.

The group works proactively with regulatory bodies developing and implementing international regulations covering the maritime industry. We promote a practical and effective international statutory regime which provides a level commercial playing field for the group’s business activities.

Developing solutions to address the environmental challenges of the maritime industry are to a high extent driven by regulations and, ultimately, convenient and effective compliance with them. As others we have experienced setbacks in our innovative efforts, but we learn and will continue to develop new environmental products and services. Our environmental commitment was broad in 2011 and will continue with undiminished vigour in 2012. Change will not happen overnight – but we will be part of making it happen.



Thomas Wilhelmsen
Group CEO
Wilh. Wilhelmsen Holding ASA

«WE BELIEVE ACCIDENTS AND ENVIRONMENTAL HARM CAN BE PREVENTED THROUGH FOCUS ON QUALITY AND SAFETY STANDARDS. »

Wilh. Wilhelmsen Holding ASA is a global maritime industry group focusing on shipping and integrated logistics services for cars and rolling cargo through its shareholding in Wilh. Wilhelmsen ASA. The group also occupies a leading position in the global maritime service industry through Wilhelmsen Maritime Services AS, delivering products and services to some 200 shipyards and 24 000 vessels annually. For more information, please visit www.wilhelmsen.com.

Reducing our environmental footprint

We work continuously to reduce our environmental footprint. On these pages we have listed several of our environmental initiatives.

WILHELMSSEN SHIP MANAGEMENT (WSM) REACHED ANOTHER GREEN MILESTONE

WSM's Green Ship Recycling (GSR) reached an important milestone on 21 September 2011 when the company was attested by Det Norske Veritas (DNV). GSR was evaluated according to DNV's standards for sustainable business with the objective that the content, suitability and efficiency of WSM's GSR procedures and processes are complete and feasible ensuring that a recycling yard meets their standards and international requirements for the safe and environmentally sound recycling of ships.

NO_xCARE BREAKS ANOTHER RECORD

Yarwil, the joint venture between Wilhelmsen Maritime Services and Yara, passed another milestone by delivering enough urea to reduce NO_x emissions by more than the Norwegian NO_x fund's total targeted amount for 2011. In 2010, monthly deliveries averaged 700 -900 tonnes. In 2011 deliveries were much higher at 1 200 - 1 500 tonnes per month, finally passing 1 500 tonnes by year end. NO_xCare 40 is a high purity urea reagent that combines with NO_x gas in the funnel, producing harmless nitrogen gas and water. NO_x-Care Service ensures smooth system operation throughout the system's lifetime. Approximately 50 Yarwil SCR systems were in production by the end of 2011.

SUPPORTED SOLAR POWERED VESSEL ON WORLDWIDE TOUR

Wilhelmsen Ships Service provided support for the 31 metre catamaran MS Turanor, which is currently circumnavigating the globe driven entirely by solar power. MS Turanor, owned by PlanetSolar, has a crew of four and is the largest solar-powered vessel in the world. She will be the first to make an entirely solar-powered round-the-world voyage. Wilhelmsen Ships Service is acting as the ship's agent through the entire voyage, providing a full range of port services and back-up support at each of the main ports that the Turanor visits, including Miami, Cancun, Cartagena, Panama, Brisbane, Singapore and Abu Dhabi.

SAVING POWER CONSUMPTION

During 2011, Wilhelmsen Technical Solutions commissioned Energy Management Technology (EMT) systems that will save a total of 50 million kWh annually. The Callenberg-EMT system controls the engine room ventilation system according to the true demand in every served area which results in an optimum operation. The system has been installed on more than 40 cruise and passenger ships with proven results since 1999.

MAIN ENGINE LUBRICATION OIL CONSUMPTION

Our newer vessels fitted with electronically controlled engines require less lubrication oil than our older engines. In addition, several of the older main engines have been retrofitted with technology which reduces the need for lubrication oil by more than half of earlier consumption.

OPTIMISING ENGINE FUEL PERFORMANCE BY FUEL EMULSION

In 2011, two of our vessels, M/V Tortugas and M/V Taiko, were fitted with a fuel emulsion system. The system mixes 5% to 20% fresh water into the fuel, producing an on-the-spot, water-in-oil emulsion. The system aims at improving fuel oil combustion and reducing NO_x emissions, black carbon/soot emissions and CO₂ emissions.

HULL AND PROPELLER MODIFICATIONS LOWER FUEL CONSUMPTION

Several of our vessels have been fitted with new technology for improving hull resistance and propeller efficiency. New energy efficient design lower fuel consumption compared with older vessels. Three of our older vessels have been fitted with a propeller boss cap fin which has led to reduction of vibrations on board which also improves fuel efficiency.

MONITOR VESSEL FUEL PERFORMANCE

During 2011 and 2012, all our vessels will be fitted with performance monitoring systems from Marorka and accurate mass fuel flow meters. These systems will continuously monitor vessel fuel performance and guide our crew with accurate information, contributing optimal sailing conditions.

MINIMAL HULL FOULING GUARANTEED

Our vessels are coated with advanced antifouling systems to ensure minimal water resistance. In addition, we coated two of our vessels, M/V Tombarra and M/V Tortugas, with high performance antifouling system from Jotun, guaranteeing that speed on these vessels will not drop more than an average of 1.5% over a five year period. Hull cleanings will not be necessary with this system applied.

AHEAD OF NEW ENVIRONMENTAL REGULATIONS

Wallenius Wilhelmsen Logistics (WWL), owned 50% by WWASA, has been a forerunner in burning bunker fuel with low sulphur. We have a self-imposed average of 1.5% sulphur in fuel consumed, compared to the world average of 2.8%. More challenging regulations on sulphur emissions are in the pipeline.

FUTURE DESIGN

The future will require even more efficient vessels and new energy carriers. The coming expansion of the Panama Canal will generate possibilities for new vessel designs. In 2011, we continued the study from 2010 of post-panamax designs to further explore possibilities this expansion could have for future vessels.

LNG AS FUEL

Future vessels will be dependent on cleaner energy carriers. Liquefied Natural Gas (LNG) is one promising new energy carrier for our vessels. A study was carried out during 2011 together with TI Contracting, aiming at reducing storage space needed to be able to operate on LNG fuel. The study was partly funded by the Norwegian Research Council.

PARTNERSHIPS

We work closely with our partners, stakeholders, external companies and R&D institutions to reduce fuel consumption even further. The outcome in 2011 has been environmental competition for our crew, crew environmental training and conclusion of the Energy Management in Practice (EMIP) project, which was supported by the Norwegian Research Council.

REGULAR VESSEL HULL CLEANING

To ensure smooth and efficient operation, all our hulls are cleaned every 12 months and their propellers are polished every six months. In addition, we support a new promising technology from the Norwegian company EcoSubsea which will ensure efficient and gentle hull cleaning. All disposals from the hull cleaning process are collected and safely treated on shore.

Environmental account 2011

The operating companies in the WW group controlled a total of 133 vessels at the end of December 2011. The fleet, purposely built to transport cars and high and heavy cargo, represented a 22% global market share measured in car equivalent units (CEU's). During 2011, the group took delivery of ten new vessels, four on WWASA's account (MV Tønsberg, MV Tiger, MV Tugela, and MV Titania). No vessels were recycled in 2011.

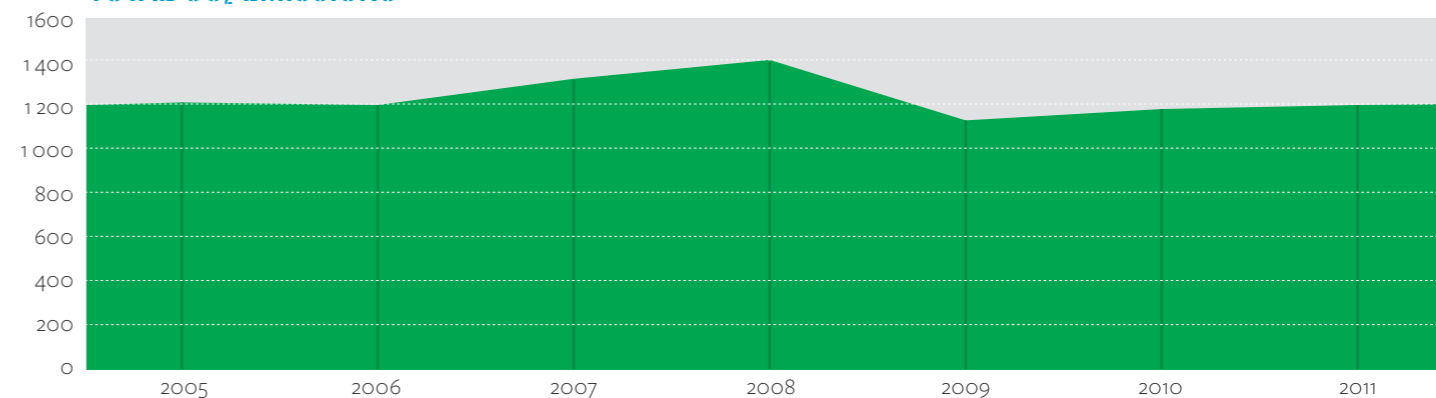
Our account for 2011 incorporates 32 vessels owned and controlled by WWASA and operated by Wallenius Wilhelmsen Logistics and EUKOR Car Carriers. Despite a solid improvement in cargo volumes transported in 2011 compared with 2010, and more sailings than the previous year, the fuel consumed per cargo transported (g/tonne nm) decreased by 1.6%, showing that our vessels operate more efficiently than ever before. CO₂ emissions increased by 1.4%. The SO_x emissions were in line to 2010, with an average sulphur content in fuel consumed on board our vessels of 1.78%. NO_x emission increased slightly from 2010 to 2011 due to more sailings with older vessels emitting more NO_x emissions than newer vessels.

FLEET LIST

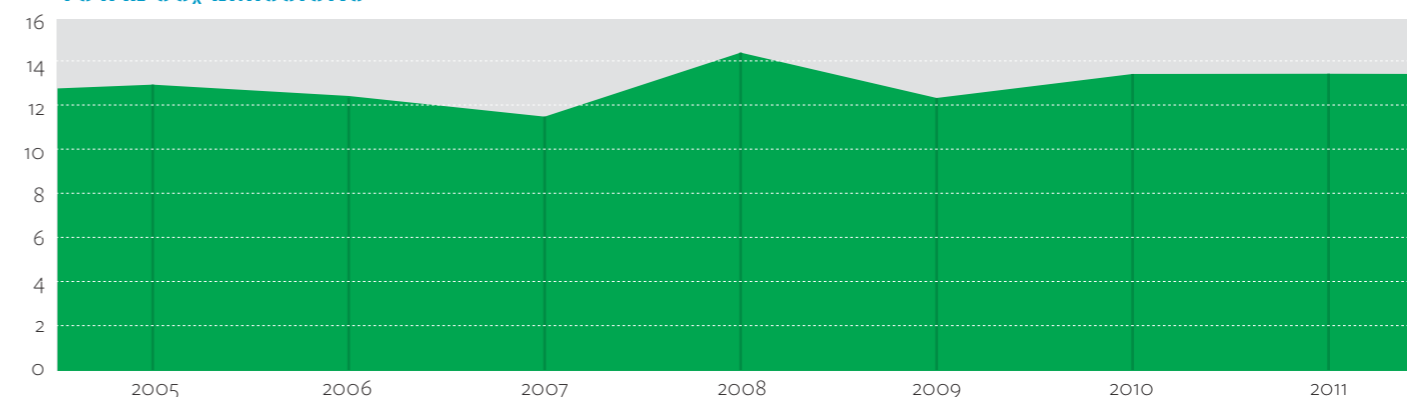
Name	Operator	Controlled by WWASA group	Type	Flag	Built	CEU
Taiko	WWL	Owned	Ro-ro	NIS	1984	4 474
Tampa	WWL	Owned	Ro-ro	NIS	1984	4 474
Texas	WWL	Owned	Ro-ro	NIS	1984	4 474
Tamesis	WWL	Owned	Ro-ro	NIS	2000	5 496
Talisman	WWL	Owned	Ro-ro	NIS	2000	5 496
Tamerlane	WWL	Owned	Ro-ro	NIS	2001	5 496
Tarago	WWL	Owned	Ro-ro	NIS	2000	5 496
Tagus	WWL	Owned	PCTC	NIS	1985	5 409
Tasco	WWL	Owned	PCTC	NIS	1985	5 409
Trionon	WWL	BB	PCTC	NIS	1987	5 828
Trinidad	WWL	BB	PCTC	NIS	1987	5 828
Torrens	WWL	Finance lease	PCTC	UK	2004	6 350
Toronto	WWL	Finance lease	PCTC	UK	2005	6 350
Toledo	WWL	Finance lease	PCTC	UK	2005	6 350
Topeka	WWL	Finance lease	PCTC	UK	2006	6 350
Tombarra	WWL	Finance lease	PCTC	UK	2006	6 350
Tortugas	WWL	Finance lease	PCTC	UK	2006	6 350
Tomar	WWL	Owned	PCTC	UK	2008	6 350
Toreador	WWL	Owned	PTCT	UK	2008	6 350
Torino	WWL	Owned	PCTC	UK	2009	6 350
Toscana	WWL	Owned	PCTC	UK	2009	6 350
Talia *	WWL	T/C	PCTC	BAH	2006	6 400
Tijuca	WWL	Owned	LCTC	NIS	2008	8 000
Tirrana	WWL	Owned	LCTC	NIS	2009	8 000
Terrier	EUKOR	Owned	PCTC	NIS	1982	4 500
Tai Shan	EUKOR	B/B	PCTC	NIS	1986	4 635
Takara	EUKOR	B/B	PCTC	NIS	1986	4 635
Tancred	EUKOR	B/B	PCTC	NIS	1987	4 635
Taipan *	EUKOR	T/C	PCTC	BAH	2006	6 400
Tarifa *	EUKOR	T/C	PCTC	BAH	2007	6 400
Morning Concert	EUKOR	Owned	PCTC	UK	2006	5 400
Tønsberg	WWL	Owned	Ro-Ro	Malta	2011	5 990
Tugela	WWL	Owned	LCTC	Malta	2011	7 880
Tiger	WWL	Owned	LCTC	Malta	2011	7 800
Titania	WWL	Owned	LCTC	Malta	2011	7 800

* Not incorporated in this environmental accounting due to external management.

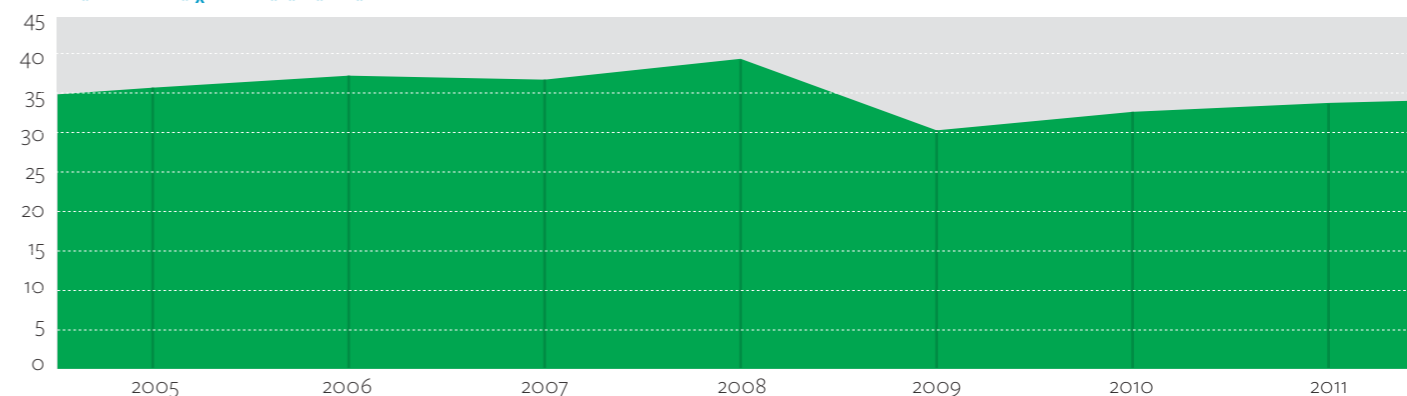
TOTAL CO₂ EMISSIONS



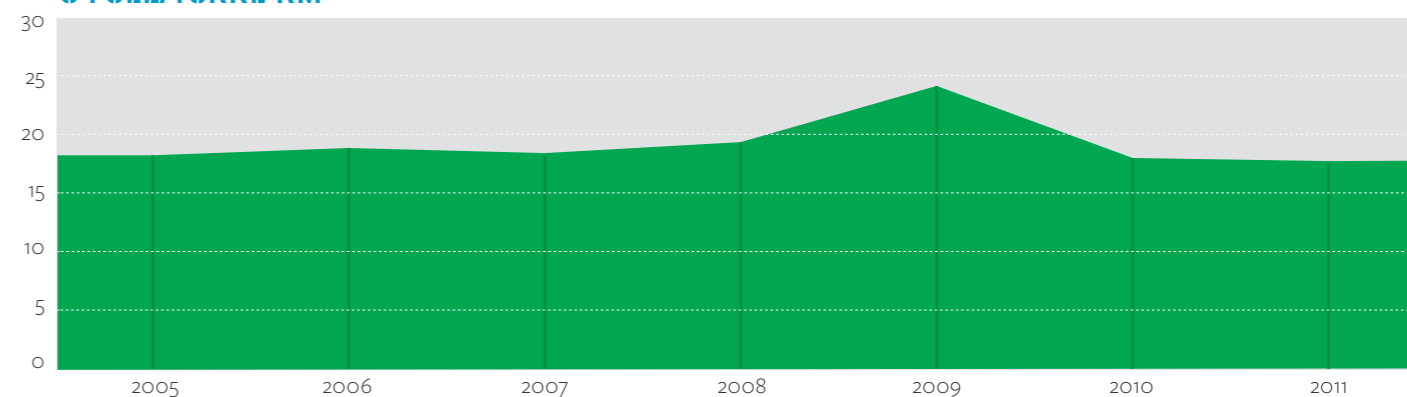
TOTAL SO_x EMISSIONS



TOTAL NO_x EMISSIONS



G FUEL/TONNE NM



Continues productive collaboration

In 2011, Wilhelmsen Maritime Services (WMS) renewed the agreement with Norway's Bellona environmental foundation.

"The purpose of this collaboration is to work together for tomorrow's shipping industry to achieve genuine improvement of the environment," says Tor Oiseth, vice president, Business development and regulatory affairs at Wilhelmsen Maritime Services.

The three-year agreement between WMS and Bellona commits the two sides to discuss environmental challenges and areas for improvement, and to develop joint proposals for innovative solutions. The parties have already identified a number of specific projects, including reduction in the sulphur content of bunkers, a ballast water treatment system and reduction of emissions to air through scrubber technology.

Bellona states that business collaboration is key to realising its vision for the shipping industry.

"Our vision is that Norwegian and international shipping should be CO₂ neutral or carbon negative by 2050. Furthermore, other emissions to air and discharges to sea must be eliminated or within what the natural environment can handle. Through its proactive approach, WMS contributes to realising our vision and setting realistic requirements for the industry," says Henrik A Lund, head of business cooperation at Bellona.

WMS' vision is to shape the maritime industry. Offering sustainable and efficient solutions to the maritime sector is one way of achieving this. Bellona's environmental expertise, combined with our maritime experience enables us to develop products and services that help our customers stay compliant with or even ahead of stricter environmental regulations. Through a mutually beneficial cooperation we will contribute to making the shipping industry greener," concludes Tor Oiseth in Wilhelmsen Maritime Services.

«THROUGH A MUTUALLY BENEFICIAL COOPERATION WE WILL CONTRIBUTE TO MAKING THE SHIPPING INDUSTRY GREENER.»



In the picture (from left): Benedicte Gude, WW Holding corporate communication, Henrik A Lund, Bellona, and Tor Oiseth, WMS. (Photo: Gorm K. Gaare)

FORUM FOR NEW MARITIME TECHNOLOGY

In 2011, we established an internal forum to examine opportunities arising out of new technology or technology that is new to the maritime industry.

The forum will look for opportunities that will help customers stay compliant with maritime legislation, improve their operational efficiency and reduce the environmental impact from shipping. Explaining the rationale and need for such a group, Tor Øiseth, vice president business development and regulatory affairs explains that group's vision to be the shaper of the maritime industry has large implications. One of them is that profitable growth and environmental progress must be stimulated by solutions, products and services that customers need and are willing to pay for.

The Forum: Members of the Forum for New Maritime Technology, from left to right: Louise Kloster, Business Manager, Ships Agency and Maritime Logistics; Thea Corwin, marketing director, Wilhelmsen Ships Service; Kai Låtun, managing director, Yarwil; Erik Lyngnes, HSEQ manager, Wilhelmsen Ship Management; Per Brinchmann, vice president technical, WW ASA ; Tor Øiseth, vice president business development and regulatory affairs, Wilhelmsen Maritime Services; Filip Svensson, vice president marine operations, WW ASA ; Iver Iversen, director new technology, Wilhelmsen Maritime Services; Petter Traaholt, president, Wilhelmsen Technical Solutions and Bernd Bauer, vice president sales and marketing (acting), Wilhelmsen Technical Solutions.



Wilhelmsen Ships Service – First choice in chemicals

With the acquisition of Nalfleet in 2011, Wilhelmsen Ships Service (WSS) is by far the world's market leader in environmentally acceptable marine chemicals.

All the chemicals are produced at the same location, the Wilhelmsen Chemicals factory just outside Tønsberg in Norway. The factory has a highly automated production system, capable of producing more than 100 million litres of chemicals per year. The manufacturing is regulated by ISO 9001 and ISO 14001, two of the strictest safety and environmental legislations in the world.

All of the water treatment chemicals will now be branded under the Nalfleet name, and the rest of the product line will be branded under the Unitor name – two well-known and trusted names in the market. Sustainability is not limited to the chemicals themselves, but incorporates the whole product lifecycle including the application equipment. Unitor and Nalfleet chemicals do not pose a threat to personal health or the environment when used correctly.

“It is about the way we work within our business and in our interactions with others. This means that we must monitor everything from the production and distribution to the on-board use. This ensures that we have sustainable solutions for the benefit of both our customer and the environment”, says Business Stream Marine Chemicals Director Graham Hunter.

Production and quality control is standardised for both product lines.

Wilhelmsen Chemical AS meets all the European REACH regulations. Throughout the production process WSS is committed to reducing waste, transport volumes, hazardous substances and recycling materials. The company's aim is to keep increasing the effectiveness of its chemicals and, at the same time, to improve safety and reduce environmental impact.

Although WSS is the largest producer of marine chemicals in the world, innovation is still the prime goal.

“It's not only about size,” says Business Director Marine Chemicals Graham Hunter about the integration of the revised chemical offer.

“We realise that customers have a choice. We need to keep innovating to lead the market.”

WSS focuses on actively involving customers in a dialogue to find new solutions to their chemical needs, something that is especially important when they see new legislation coming their way. Waste water, tank and cargo hold cleaning and fuel additives are some areas where WSS sees a potential for growth in the marine chemical segment in the years to come.

WILHELMSSEN SHIPS SERVICE

WSS is the world's leading maritime services provider, with the capacity to service 2 400 ports in 125 countries. Its focus is to deliver improved vessel operating efficiency to the merchant fleet. In 2011, WSS made 214 000 product deliveries to 24 000 vessels and handled 54 000 port calls.

WSS supplies Unitor and Nalfleet marine products, technical services, ships agency services and maritime logistics. The company has 4 500 employees operating out of 350 offices in 71 countries.

«WE REALISE THAT CUSTOMERS
HAVE A CHOICE. WE NEED TO KEEP
INNOVATING TO LEAD THE MARKET.»

Helping owners save fuel and reduce emissions to air

Wilhelmsen Technical Solutions (WTS) continued its environmental focus in 2011. One of the areas that have great potential for growth is the proprietary energy management technology solution, Callenberg-EMT, which was recently installed on Cunard's Queen Mary II.

To date, the fuel-saving system has been installed on more than 40 cruise and passenger ships since 1999, with proven results. Starting in 2012, WTS will expand the customer base for Callenberg-EMT with a targeted approach, marketing the system to merchant vessels.

"The Callenberg-EMT system has great potential," says Magnus Hansson, WTS director engineered solution: "We will use our experience together with our global network of knowledge engineers, sales and customer service to help ship owners save energy."

"In an uneasy global market where energy prices are high, a system that saves fuel and has a full payback time ranging from six months to a maximum of two years, should generate interest from customers looking to improve their operational efficiency and increase their profitability. Installation can be done seamlessly during regular operations."

The Callenberg-EMT system for engine rooms controls the engine room ventilation system according to the true demand in every served area which results in optimum operation. The system gives most savings during slow steaming, as the capacity of engine room ventilation and combustion air is made to match the much lower ventilation demand. This can translate to annual savings of more than 30%.

"If you don't have smart control systems, you will not gain the full profit of fuel savings," says Hansson, noting that the system also reduces both noise and emissions to air.

Reducing shipboard emissions

Another environmental offering from WTS is NO_xCare, a solution for reducing shipboard emissions to air. Since its introduction in 2009, around 120 systems have been ordered. NO_xCare is offered to ship owners and operators as an efficient solution for reducing shipboard emissions of Nitrogen Oxides up to 95%. The system has three elements: NO_xCare SCR, NO_xCare 40 and NO_xCare Service.

NO_xCare SCR is a reactor based on Selective Catalytic Reduction technology, which is the only proven technology today that produces the needed results. NO_xCare 40 is a high purity urea reagent that combines with NO_x gas in the funnel, producing harmless Nitrogen gas and water. NO_xCare Service ensures smooth system operation throughout the system's lifetime. This advantage will become even more important as 2016 nears, when new vessels operating in Emission Control Areas (ECAs) will be required to have such a system.

WILHELMSEN TECHNICAL SOLUTIONS

- WTS is a global provider of cost efficient, fully engineered solutions, equipment and services for newbuilds and retrofits in the maritime and offshore industries.
- The company's expertise includes fire suppression and prevention, heating, ventilation, air-conditioning and refrigeration (HVAC -R), power optimisation, power distribution and control systems.
- WTS designs, produces, installs, commissions and maintains its solutions for the lifetime of customers' vessels, rigs and platforms.
- Technical sales teams, localised engineering teams and highly trained commissioning and service engineers are located at offices across the world.
- Total number of employees in WTS is approximately 700.



WTS delivers NO_xCare, a solution for reducing shipboard emissions to air, to four new vessels ordered by the Swedish Coastguard and being built at the Peene Werft in Germany.



Queen Mary 2: The famous ocean liner is being equipped with brand new proprietary energy management technology solution (Callenberg EMT) from Wilhelmsen Technical Solutions. In the picture the ocean liner sails past the Verrazzano Narrows Bridge in New York.

Environmental vessel operation

Efficient and environmental vessel operation combined with training of officers and crew were key issues for Wilhelmsen Ship Management (WSM) in 2011.

WSM was at the end of 2011 operating more than 150 vessels on behalf of owners. In addition, WSM provided crew to an additional 300 vessels in the global merchant fleet. In order to be a premium ship manager, continuous focus is demanded on training, transparency and environmental management.

By the end of 2011, all WSM management offices were compliant with the ISO14001 certifications. These certifications prove that WSM's Environmental Management System has been measured against a best practice standard and found compliant. This is indeed an important milestone for WSM in the company's quest to maintain its position as a social and environmentally responsible manager.

Green recycling

Green ship recycling was the new and additional green product in the portfolio of WSM in 2010. Green ship recycling services are specially designed for ship owners who demand a demolition process based on a safe working environment at the yard and identification and safe disposal of all hazardous materials on board. In 2011, WSM has completed the Inventory of Hazardous Materials

(also known as Green Passport), a key requirement of the Ship Recycling Convention and forms the basis of the Ship Recycling Plan. This plan is prepared before a vessel is recycled and is central to a safe and environmentally sound recycling of ships. WSM has selected Chinese yards, which dismantle at the quayside in full compliance with the International Maritime Organisation's new Hong Kong Convention (May 2009) on ship recycling.

Since February 2009, The U.S. Environmental Protection Agency has issued a compliance document to identify 26 possible discharges into the sea from vessels that are covered by the Vessel General Permit. WSM response is a compliance programme in place for all vessels that operate in US waters. Each vessel, owner/operators are required to submit a one-time report between 30 months and 36 months after obtaining permit coverage. In 2011, the report was completed for all WSM managed vessel allowing the vessels continued coverage under the Vessel General Permit.

WILHELMSSEN SHIP MANAGEMENT

- WSM is one of the world's largest providers of third-party ship management services and has an extensive range of solutions to all vessel segments on a global level.
- Ship management services include: technical management, crew management, green ship recycling, green passport (IHM), newbuilding/conversion consultancy, marine insurance, commercial management, maritime training and IT solutions.
- WSM has its head office in Kuala Lumpur, with management offices in Oslo, Southampton, Houston, Singapore and Busan. Total number of employees in WSM is approximately 400.
- WSM provides crew or/and technical management to more than 400 vessels, including ro-ro vessels, container ships, bulk carriers, car carriers, seismic ships, LNG and LPG vessels, product tankers, offshore supply ships, passenger vessels and specialised vessels.
- More than 9 000 seafarers are working for WSM in their global crewing network.



«IN ORDER TO BE A PREMIUM SHIP MANAGER, CONTINUOUS FOCUS IS DEMANDED ON TRAINING, TRANSPARENCY AND ENVIRONMENTAL MANAGEMENT.»

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WILHELMSSEN MARITIME SERVICES ENVIRONMENTAL PAGES

MORE INFORMATION

For more information about
Wilh. Wilhelmsen Holding's
environmental initiatives,
please contact Arild S. Johannessen,
communication manager, by email:
arild.johannessen@wilhelmsen.com