BV EVENTS

TWO MORE FOR MSC CRUISES IN 2008

During 2008 MSC Cruises will take delivery of two ultra modern cruise ships from Aker France. The "MSC Poesia" and the "MSC Fantasia" will set new standards in environmental friendliness and will both have BV's Cleanship 2 notation.
The first to be delivered in early 2008 will be the 2,550 passenger "MSC Poesia." She is 294 m loa, will carry a crew of 987 and of the 1275 cabins, over 800 have private balconies.

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"MSC Orchestra" delivered last spring, sistership of the "MSC Poesia"

BV EVENTS

INNOVATIVE LNG RV SOON TO BE DELIVERED

The 151,000 cu m LNG RV "Explorer", the naming ceremony of which took place on 14 February with the attendance of Nicolas Saverys, chairman and CEO of Exmar, and Rob Bryngelson, Chairman and CEO of Excelerate Energy, is due to be delivered to its owners Exmar and Excelerate Energy from Korea's DSME in March 2008. This vessel will be the fourth LNG RV of the series of innovative vessels built by DSME but she will be the first of this size, substantially larger than the initial 138,000 cu m vessels.
Another innovation is that the 291m LOA vessel is fitted with a SINOx system which reduces NOx emissions from ship's engines. This makes another step towards a further minimization of the environmental footprint of the vessels.

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TRAINING

BETTER SAFETY THROUGH BETTER TRAINING

Roberto Nahon, Head of the BV Systems Certification & Training department, presented a paper on 'Quality of Maritime Education and Training' at the International Maritime Conference – "Sharing Best Practices in Maritime Education and Training to Meet World Shipping Needs" - held in Iloilo, Malaysia, in January 2008.
The event was sponsored by John B. Lacson Foundation Maritime University, the first Maritime University in the Philippines, which has more than 9,000 students.
The paper introduced two services developed by BV to meet the new challenges of the maritime community in connection with human element and safety issues: BV Training Solutions, and the Certification of Training Institutes and Training Courses.

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Move Forward with Confidence

BUREAU VERITAS 1828

VeriSTAR news

NEWSLETTER OF THE MARINE DIVISION
MARCH 2008

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FOREWORD
BY BERNARD ANNE
Managing Director Marine Division

Bureau Veritas is 180 years old this year. Since our beginning as a ship classification society in northern Europe we have grown to be the world's leading classification and certification company. Today we employ over 30,000 people in 700 offices worldwide, and are active in every field of endeavour, setting and maintaining standards.

Our 180 years of service to shipping give us two major strengths. One is a massive depth of accumulated expertise across every ship type. The other is a great tradition of service. Those two key strengths are the platform from which we look forward, always ensuring that we are at the cutting edge of technology, and always delivering that technology in a way which meets the needs of our demanding clients.

We classed the first LNG carriers, we classed the first LNG RV vessels and the first dual fuel diesel electric LNG carriers, and we shall continue to help shipowners and shipyards to innovate in liquefied gas and energy transportation. Likewise, we have a long track record with passenger shipping, and today are classing the most modern, innovative and environmentally friendly cruise ships. Up to date, but never forgetting our roots.

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Vent Portant

REGULATION

NEW REGULATIONS, NEW OPPORTUNITIES

Compared to the tourism and leisure industry, the cruise industry has proven to be very resilient over the past ten years and has experienced massive growth. We can expect still more expansion over the next few years, with Europe following the lead of the United States, which is already reporting double-digit growth figures in this sector.
A major rejuvenation of the world cruise fleet has taken place, with large numbers of newbuildings entering the market, and many new vessels still under construction. All these new vessels are fully compliant with the latest safety regulations, and many of them are to comply with the very highest standards of environmental awareness and responsibility.
More developments are on the way, specifically those affecting the older end of the cruise fleet, where most of the smaller units are to be found. From October 1, 2010, the last stage of the 1992 amendments to SOLAS comes into effect. This applies retroactively to passengerships built to SOLAS 60 standards – effectively, most ships built before 1980.
We estimate that between 40 and 60 older cruiseships may have to address the issue of how to meet the new standards. Some may go for conversion, if suitable upgrading solutions can be identified to allow these vessels to continue in service. But a number of vessels may be too old or not suitable for conversion, with the result that they will end their lives as floating hotels, or even be sold for scrap.
Consequently, there will not be enough of the older type of converted vessels to meet growing demand, a phenomenon which has in fact already hit the smaller vessel sector. If they want to stay in business, the owners of such vessels will have to invest in newbuildings. And this may prove to be a blessing in disguise, given the significant savings – in terms of manpower, maintenance and fuel costs - which can be made from running more efficient ships. Added to that, new vessels embracing the latest technology and highest industry standards are in many respects a more attractive market proposition than older tonnage.
So far, we see little evidence of very many contracts being placed for new, smaller cruiseships, which are seen as uneconomic when compared to the scale effect offered by the very large ships. There are, however, some interesting 'economy' benefits associated with building larger series of small units, where only the final outfitting is custom-built to suit different market requirements.
Some major shipbuilders are already putting forward attractive propositions in this regard. And it may well be that this could induce the smaller cruiseship players to bring forward their renewal projects.
So, with the 2010 regulation changes looming, it is time to look both ways. Yes, there will be very big ships built to the latest standards. But there will also be a gap in the market for older, smaller ships. It is time for shipbuilders and owners to gear up to meet that demand.
Bureau Veritas is here to help owners and operators plan their strategy now, ahead of the enforced changes which new regulations will bring.

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CLIENT **PROFILE**

OCEANIA CRUISES INTO DESTINATION WITH BV

Mr. Robin Lindsay, Oceania Cruises

Robin Lindsay, Executive Vice-President of Vessel Operations for US-based destinations cruise company Oceania Cruises, says, "Our number one priorities are safety, security and service."And Oceania is working with Bureau Veritas to meet those key objectives.

Robin is responsible for all aspects of Oceania's fleet activities, including Hotel Operations, Marine & Technical Operations, new vessel construction and ship refurbishment. He has been in the industry for 29 years. He started out at Royal Caribbean, but has spent the majority of his career in the luxury sector at Radisson Seven Seas and Silversea, where he gained a lot of experience with new ship construction. He joined Oceania in early 2003 as Senior Vice-President of Hotel Operations, and added Marine and Technical operations to his responsibilities in 2005.

Robin explains, "Oceania is the market leader in destination cruising. Our focus is on fine dining, in-depth destination experiences and providing the best aspects of luxury cruise products at a price point that is just above the large ship premium lines. The majority of our guests are experienced cruisers who are "stepping up" from the large-ship premium lines and they want a more intimate, personalised experience that can only be found on mid-sized ships. We currently operate three 684-guest ships and have two 65,000 gt, 1,256-guest ships building for delivery in 2010 and 2011.

"Bureau Veritas is the classification society for our three existing vessels and has also been contracted by Fincantieri as the class society for our two new vessels under construction at Fincantieri in Italy. We also have an option for a third vessel that will likely be executed in late 2009.

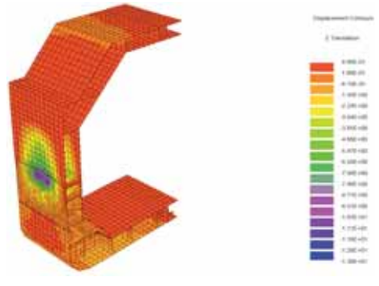
BV excels in the same priorities as Oceania – safety, security and service. It is quick to respond to our needs and to present innovative and cost-effective solutions. Technology is paramount in this day and age, and the VeriSTAR software is extremely user-friendly and efficient.

"We have been working with BV since Oceania's inception in 2003 and it has been an exceptional partner. Building new ships is always a challenge, but to meet all the changes in current requirements and regulations, as well as to anticipate changes on the horizon, makes for even greater challenges. We could not do that without our partnership with BV."

www.oceaniacruises.com

TECHNICAL **FOCUS**

ARCTIC LNG PROJECTS BREAK ICE



Bureau Veritas is applying its extensive experience with LNG shipment to the special problems of high latitude routes. During 2008 BV will publish an update to its Cold Environment Notation with a deeper focus on the needs of the cargo containment and cargo handling systems and equipment, in particular those of LNG carriers. It has already issued Polar Class Notation standards for hull, machinery and outfit during 2006, setting out the requirements for all ships for Arctic use. The rules are based on an IACS UR, and have been brought into force by BV ahead of other societies. It has also issued a COLD notation to cover all extreme winterisation aspects of the vessel, including special steels, deck ice clearance and pipe tracing.

The first phase of a major study working with Aker into the hull and inner skin scantlings and reinforcements needed to keep deformation and stress on the inner hull compatible with the specifications of the containment system of a membrane LNG carrier during Arctic service has been completed. The next phase of the project will repeat the exercise for LNG carriers with free standing tanks. In these studies BV applies the specific loads for very severe high latitude ice conditions and carries out the extensive modelling required to assess the structures. A second research programme into the use of pod propulsion in Arctic areas is also underway, which will help substantiate the extension of the BV pod rules to cover Arctic use during 2008.

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VeriSTAR MARCH 2008

NEW **RULES**

PASSENGER SHIP BALCONIES

No cruise ship today is complete without balconies, but until recently there were few standards for fire prevention and protection for these areas. However, a recent casualty has shown there is risk of fires on balconies, and accordingly the IMO Sub-Committee on fire protection has finalised a standard for fire suppression systems on cabin balconies. It is now ready for approval by the Maritime Safety Committee with the draft standard on fire detection, in time before the entry into force of SOLAS amendments dealing with fire safety of cabin balconies on passenger ships.

The Sub-Committee also finalised guidelines for fire safety of other open deck areas. These guidelines will recommend a fire risk assessment of these areas, and possible mitigation measures as necessary.

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ENVIRONMENT

SHIP RECYCLING GUIDANCE

Despite the absence of an international agreement on ship recycling, there is now more pressure than ever on owners to recycle ships in an environmentally and ethically responsible manner. The key to that is to have full knowledge of the hazardous and contaminating materials on board the ship. But for most ships, which were built before the idea of Green Passport listings was developed, that is not a simple task.

Based on extensive experience in practice, especially with the French aircraft carrier "Clemenceau", BV has developed guidelines to help owners of existing ships and also yards building new ships. Guidance Note NI 528 on Green Passports provides guidance to shipyards and shipowners on how to compile an inventory of potential hazardous materials to be found on board their ships. This document is to be completed in compliance with IMO Resolution A.962(23) and is intended to be up-dated through the whole life of the vessel. It can then be submitted to a competent recycling facility before dismantling.

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...NEWS IN BRIEF...

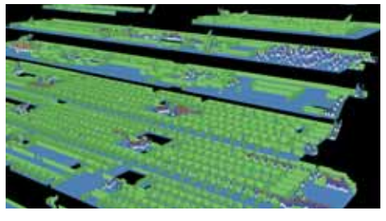
Bureau Veritas has classed the "Beluga" Skysails, in 2008. This newly built multi purpose and heavy lift vessel is fitted with a 160 sq m SkySail delivering about

5 tonnes tractive force to supplement the engine. It has now been tested on an ocean crossing from Germany to Venezuela, and initial results show fuel savings of between 10 and 35 per cent. BV was involved with stability and strength calculations to prove that the sail could be flown safely...

Brunei Gas Carriers has confirmed the order for two 147,000 cu m LNG carriers at DSME with BV class for delivery in 2011. The ships will be fitted with a dual fuel diesel electric propulsion and with a GTT NO96 membrane containment system...

TECHNICAL **FOCUS**

FIRE SAFETY ENGINEERING FOR THE DESIGN OF MARINE COMPOSITE STRUCTURES



The increased desire to use composite materials in ships has led Bureau Veritas to take a leading role in a French collaborative research project which aims at developing a Fire Safety Engineering methodology compliant with the IMO rules that could enable the use of composite materials in superstructures.

MP08 Fire performance of composite materials is supported by the Pays de Loire Region and French ministries, and involves shipyards (DCNS, Aker Yards France, Bénéteau) together with Bureau Veritas and public bodies as the LNE (Laboratoire National d'Essais), EMN (Ecole des Mines de Nantes) and ISMANS (Institut Supérieur du Mans) and a supplier (SAITEC).

The project is intended to develop different applications for composites onboard both civilian and naval ships. Combustible materials are currently forbidden in classified Navy ships and SOLAS ships. MP08 holds the possibility of new performing composite materials and innovative applications which would be allowable under SOLAS Chap II-2 rule 17 Alternative Design and Arrangements for Fire Safety.

The FSE method aims at demonstrating that the alternative design is as safe as or safer than a prescribed design. Two main engineering analyses are used. A preliminary risk analysis provides fire design scenarios and a quantitative analysis numerically simulates or tests these scenarios on the two designs and compares their performance.

Bureau Veritas successfully achieved the Design Scenario selection in 2007. The project will end in 2009 with the results of the simulations of fire and smoke propagation, evacuation of passengers/troops and thermo-structural analysis.

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