

VeriSTAR NEWS MARINE



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VERITAS**

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FOREWORD BY
TIM PROTHEROE

Regional Chief Executive M&O
North America



The cruise industry is expanding rapidly: demand is growing – ships are ever bigger, expedition ships are exploring further. The range of customer experiences, activities and entertainment, as well as increasing luxury, are requiring us to provide solutions to help manage risk.

The market needs quieter, cleaner and more connected ships. The constant evolution of regulation and new technologies, especially cleaner fuels, requires the close support of the classification society at the earliest stage of each new project – and then through the life of the ship.

Bureau Veritas is at the forefront of the evolving industry, helping owners, designers and yards meet the highest standards of safety, performance, sustainability and environmental care.

We very much look forward to seeing you at Seatrade Cruise (Booth No 2261).

tim.protheroe@bureauveritas.com



CRUISING TOWARD SUSTAINABILITY

Courtesy PONANT-SDI

Highly exposed to the public and often operating in environmentally sensitive areas, the cruise industry is embracing cleaner fuels and alternative power systems to reduce emissions and its environmental footprint.

In line with the newly adopted strategy laid out in 2018 by IMO, fleets are moving toward LNG as fuel. It enables compliance with the most stringent IMO emission limits for nitrogen oxides (NOx) and sulfur oxides (SOx) without additional exhaust gas treatment. It provides a first step towards lower greenhouse gas emissions and can serve as a suitable transition fuel before a future move to carbon-neutral and carbon-free fuels.

Bureau Veritas is a leader for the classification of LNG fueled ships and LNG bunker vessels, running the gamut from large cruise ships to expedition cruise ships and RoPax ferries. We can provide in-depth technical support concerning gas containment technology, propulsion system design, LNG bunkering, and safety systems and training. Relevant class notations include additional service features like gasfuel and dualfuel, as well as the GAS-PREPARED notation.

Batteries—combined with a direct current (DC) electrical grid that allows for variable speed

engines—are another form of propulsion on the rise, particularly for ships with large variations in power demand. Batteries can provide optimum energy efficiency and (temporary) zero-emission operation. Electric-hybrid power systems have been successfully trialed on ferries and could also prove capable for cruise vessels.

Bureau Veritas rules include dedicated BATTERY SYSTEM class notations for the safe installation and use of batteries on board and the ELECTRIC-HYBRID notation, which covers power management, power backup and zero emission modes. A new ELECTRIC-HYBRID PREPARED notation that prepares ships for future installation of batteries is currently under development.

French luxury cruise operator PONANT has ordered the world's first dual fuel electric-hybrid expedition cruise ship from VARD Søviknes for delivery in 2021. Classed by Bureau Veritas, this highly advanced vessel combines clean fuels and electric power storage. Its advanced battery system is expected to set a new benchmark in sustainability in the cruise industry. Bureau Veritas will continue engaging with forward-thinking industry partners to develop the technology and regulatory framework for low- and zero- carbon fuels and advanced power systems.

andreas.ulrich@de.bureauveritas.com



Courtesy Mystic Group

EXPLORING THE HIGH SEAS

The Mystic Group, the world's third-largest river cruise operator, is expanding into oceangoing cruising. Its first vessel - a 126m passenger expedition ship, *World Explorer* - is due to deliver in April 2019 from the WestSea Shipyard in Viana do Castelo, Portugal. Mário Ferreira, Founder and Chairman of Mystic, shares his vision for his company's journey from the rivers to the oceans.

"The ocean cruise business for us is a natural extension of what we have done for the past 26 years with river cruises," Mário says. "World Explorer is only the first of a series of vessels we intend to build."

Another ship, *World Voyager*, will be ready by April 2020, while *World Navigator* will launch no later than April 2021. The ships' large and luxurious accommodations can hold up to 200 passengers, a number that Mystic is very used to handling in its river vessels while maintaining its tradition of calling all guests by their names.

All of Mystic's ships are built in Portugal and operate under the Portuguese flag. Along with being Mário's home nation, Portugal offers cost management benefits, and ships there can be designed and fit out to Mystic's strict specifications.

World Explorer will spend the northern summer in the Baltic, the Norwegian fjords, Iceland and Arctic. From November, she will operate in the Antarctic for the season, based out of Ushuaia in Tierra del Fuego, Argentina.

"Our guests can expect a five-star hotel level of comfort when aboard our vessel. Available space per guest is larger than usual, and guests can experiment with different spaces. The food is provided by great European chefs, and the ship is equipped with a state of the art stability system that will help make a most enjoyable ride."

Mário talks about Mystic's environmental focus: "We won't use any single-use plastics on board the *World Explorer* and the ship's garbage room can compact, treat and refrigerate waste, so we can bring it back to port. And *World Explorer*'s fuel consumption is very low compared to similarly sized vessels."

Bureau Veritas is very proud to class Mystic's newbuildings, which are being built to the new Polar Code regulations. "Bureau Veritas is a very strategic partner for all the vessels we have built in the past, and in particular for this one," Mário says. "The experience of the Bureau Veritas team of engineers has played a huge and important role in the success of this prototype ship accomplishment."

www.mysticinvest.com



Mário Ferreira
Chairman, Mystic

ICHECK FOR CYBER VESSEL HELPS FIGHT CYBER ATTACKS

Bureau Veritas Marine & Offshore has launched its brand new application, iCheck for Cyber Vessel, helping maritime stakeholders to move a step closer to cyber resilience.

Marine and offshore units are becoming more connected, and complex systems and infrastructure are highly integrated and collect extensive data. As a result, unprotected assets are ever more vulnerable to cybercrime.

iCheck for Cyber Vessel enables owners, designers, integrators and OEMs to perform a high-level assessment to evaluate the level of cybersecurity present in their onboard and offshore systems, and unit infrastructures.

To prevent hacking, data theft, and malware attacks, asset owners can implement a range of measures for both onboard and onshore systems. iCheck self-evaluation helps them to undertake further detailed risk analyses of vulnerable systems and measure security procedures against industry best practice guidelines.

For more info:
<https://marine-offshore.bureauveritas.com/digital/your-applications/ichack-cyber-vessel>
najmeh.masoudi@bureauveritas.com



MY FUEL CONSUMPTION APP UPDATE RELEASED

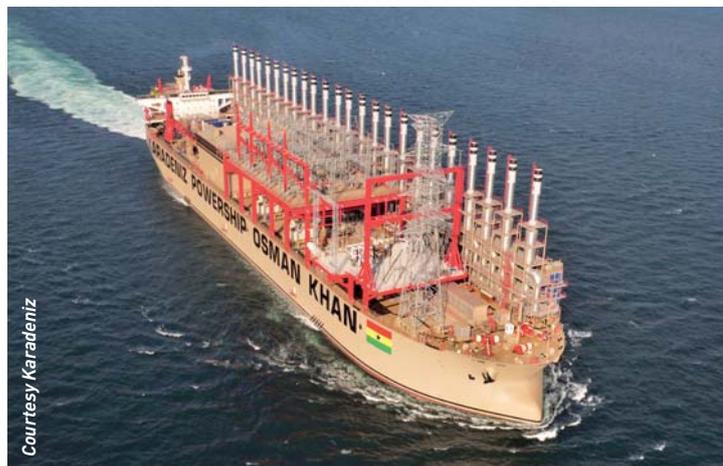
My Fuel Consumption (MFC) from Bureau Veritas is an online tool that guides owners through the regulatory requirements of IMO's Data Collection System (DCS) and EU Monitoring Reporting and Verification (MRV) requirements.

The latest MFC phase released in January 2019 enables easy reporting of fuel consumption and/or CO₂ emissions data with the IMO and EU schemes—with no double booking. MFC also supports operational performance.



MFC is a secure cloud-based web application available on desktop, mobile, and tablet to owners and managers of both Bureau Veritas and non-Bureau Veritas classed ships. To take advantage of the free service, users must simply have a contract for IMO DCS or MRV services provided by Bureau Veritas. Visit the tool today at <https://myfuelconsumption.bureauveritas.com>

ghizlaine.rouboal@bureauveritas.com



BV CLASSES NEW-GENERATION LNG CARRIERS

Bureau Veritas has been appointed to class the latest generation of LNG carriers. The ships, with a cargo capacity of 174,000 m³, are currently under construction in the shipbuilding facilities of SHI, HHI, HSHI and DSME. Low BOR Mark III Flex technology and more efficient propulsion systems with XDF and MEGI engines have been proposed. New reliquefaction technologies are being assessed.

In the field of small scale LNG, Bureau Veritas classed the *Coral Methane* and the *Oizmendi*, ships dedicated to LNG bunkering after their conversions in 2018. Bureau Veritas has also been recently asked to class two new LNG bunkering vessels at Keppel Nantong and Sembcorp, shipyards with capacities of 5,800 m³ and 12,000 m³ respectively, the latter with Mark III Flex technology.

carlos.guerrero@bureauveritas.com



NEW NOTATION FOR FLOATING POWER

Interest has been growing recently over the use of clean fuels in floating power facilities due to increased environmental regulatory pressures.

Bureau Veritas has recently issued a new set of requirements covering the assessment of floating units fitted with power generation equipment. Such units connected to the electricity grid must comply with Rule Note NR 656. They will be granted one of the following additional service features: POWERGEN(OIL) when the power plant use fuel oil as fuel; POWERGEN(LNG/NG) when the power plant uses natural gas (NG) or liquefied natural gas (LNG) as fuel; and POWERGEN(DUALFUEL) when the power plant uses both oil and gas as fuel.

carlos.guerrero@bureauveritas.com

NEWS IN BRIEF...

■ Bureau Veritas hosts IGU World Report 2019 final meeting

Bureau Veritas was honored to host a task force group meeting of the International Gas Union in the frame of its LNG committee. The meeting took place in February 2019. The task force group was involved in the elaboration of the IGU 2019 World LNG Report, which will be published during the LNG2019 conference and exhibition in Shanghai.

■ Guidance to reduce on-board systemic failures

Bureau Veritas, TMC Marine, the casualty and salvage experts, and the London P&I Club, have teamed up again producing a guidance

document, *Reducing the Risk of Incidents due to Systemic Failure*.

The new booklet provides clear, practical advice to help prevent systemic failures. Key elements highlighted include the management of change, as well as work planning meetings and the importance of a *Permit to Work* system. The circular nature of the Safety Management System (SMS) is also emphasized.

For further information and to download your copy go to:

<https://marine-offshore.bureauveritas.com/bureau-veritas-tmc-marine-and-london-pi-club-issue-guidance-reducing-board-systemic-failures>



Courtesy MSC Cruises

MSC HOLDS CEREMONIES FOR NEW MERAVIGLIA-CLASS SHIPS

On February 27 at Chantiers de l'Atlantique, MSC held the coin ceremony for *MSC Virtuosa*, the fourth ship in its Meraviglia class. MSC also welcomed to the fleet *MSC Bellissima*, which was delivered by CDA that same day and christened by Sophia Loren on March 2. Bureau Veritas contributed to *MSC Bellissima*'s on-time delivery, and looks forward to supporting both CDA and MSC in completing the next Meraviglia-class ships in 2019 and 2020.

andreas.ullrich@de.bureauveritas.com

AFRAMAX TANKER EIKEVIKEN DELIVERED



Courtesy SHI

Samsung Heavy Industry recently delivered the Aframax tanker *Eikeviken* to Viken Crude AS. *Eikeviken* is the sister ship of *Breiviken*, delivered in 2018. The 112,000 dwt ships were built in compliance with CSR-H, and each has been reinforced for ice. Bureau Veritas thus granted the ships the notation ICE CLASS 1A. Other notations granted include CPS(COT) in accordance with IMO Resolution MSC.288(87), and CARGOCONTROL.

carlos.guerrero@bureauveritas.com

REWARDING INNOVATION



Bureau Veritas and its clients were recently honored with multiple awards that showcase innovation.

Alongside partners DGA, Naval Group, Meca, LoireTech and AML, Bureau Veritas received the JEC Asia Marine Innovation Award for the FabHeli composite propeller project. The May-June 2019 edition of JEC Composites Magazine will give more information on Bureau Veritas' research, innovation and development for composite marine and offshore applications.

Meanwhile, the new Bureau Veritas-classed Louis Dreyfus Armateurs vessel *Wind of Change* won the offshore renewable award at this year's OSJ Conference. *Wind of Change* is an innovative service operation vessel (SOV) delivered in 2019 to Ørsted. A second vessel, the *Wind of Hope*, was ordered in 2018.

stephane.paboouff@bureauveritas.com

eva.peno@bureauveritas.com

REDUCING THE ENVIRONMENTAL IMPACT OF NAVAL SHIPS

As naval expansion continues worldwide, countries are reinforcing their fleets through newbuilds and retrofitting. In 2018, Navantia delivered ships *Audaz* and *Furor* to the Spanish navy. These are the fifth and sixth vessels in a series of 93-meter, 2,500-ton Buque de Acción Marítima ships. Lighter than the first four, these MARPOL-compliant vessels feature diesel-alternating engines and sewage treatment plants, lessening their environmental impact.

florian.geiss@bureauveritas.com



Courtesy Navantia

CONTACT FOR VERISTAR NEWS MARINE

Nick Brown: 33 (0) 1 55 24 78 78
nicholas.brown@bureauveritas.com

Annie Lavrencic: 33 (0) 1 55 24 72 29
annie.lavrencic@bureauveritas.com

Bureau Veritas Marine & Offshore, 8 cours du Triangle, 92937 Paris La Défense Cedex, France - <https://marine-offshore.bureauveritas.com>