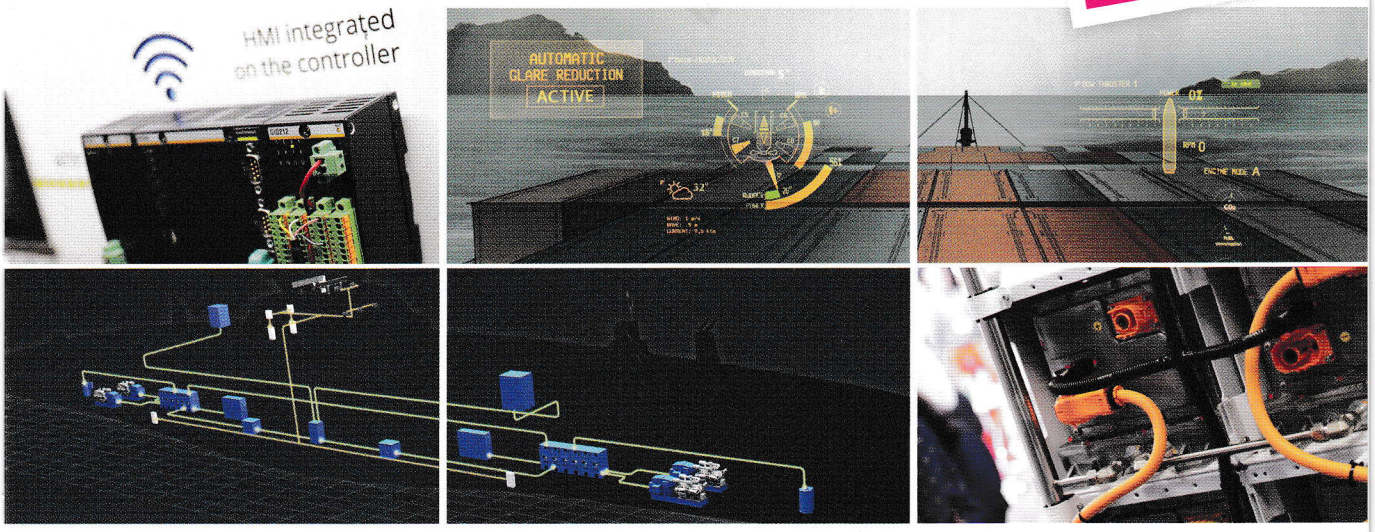
electric & hybrid marine WORLD EXPO 2020 CONFERENCE

Autonomous Ship TECHNOLOGY Symposium

JUNE 23, 24, 25, 2020
AMSTERDAM RAI, NETHERLANDS

ONE DELEGATE PASS, TWO CONFERENCES!



FEATURED COMPANIES INCLUDE:

SATEL Mission-Critical Connectivity · CARNIVAL MARITIME · GE Power Conversion · DANISH MARITIME AUTHORITY · BAE SYSTEMS · EMSA European Maritime Safety Agency · Port of Amsterdan Port of partnership · ONE SEA Autonomous maritime ecosystem · VATTENFALL Network Solutions

PRELIMINARY PROGRAM

Sponsors

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Taking place at

electric & hybrid marine WORLD EXPO 2020

KEY SPEAKERS INCLUDE:

Sebastian Sala, head of innovation and energy management, Carnival Maritime, Germany
Jan-Erik Räsänen, head of new technologies, Foreship Ltd, Finland
AIDAperla 10MWh battery retrofit during operation

Dr Makhlouf Benatmane, marine navy solutions leader, GE Power Conversion, UK
Britain's biggest warship – HMS Queen Elizabeth aircraft carrier integrated full electric propulsion

Graeme Hawksley, managing director, Hybrid Marine Ltd, UK
European Interreg 2 Seas project – Implementation of Ship HYbridization (ISHY)

Spotlight presentations

Assessment of MAS impact on safety using historical data

Gordon Meadow, founder and CEO / chair IMarEST MASS SIG, SeaBot XR, UK
John Cross, professor of marine engineering, Marine Institute of Memorial University, Canada

The development of MAS could hold great promise for improvements in shipping safety. Apart from demonstration projects, MAS has yet to move into full-scale commercial operation, therefore little data or formal safety cases currently exist. Opportunely, there is however a large bank of available information on previous shipping accidents and incidents. This presentation will share the findings of a research project benchmarking the root causes of several historical shipping incidents and the quantitative impact of greater functional autonomy. We will explore safety improvements as well as where the introduction of greater automation could introduce new dangers.

The case for vessels operating autonomously

Antoon van Coillie, director, Zulu Associates/Anglo Belgian Shipping Company, Belgium

Autonomous shipping is driven by the need for sustainability. In this presentation Antoon van Coillie – who founded Zulu Associates, a platform to initiate, develop and invest in marine component of logistics chains – will explore the main areas of development pursued to achieve modal shift, such as autonomous inland barges and autonomous short sea shipping vessels, as well as alternative propulsion modes in order to achieve zero or near-zero emission propulsion in both cases.

Does autonomous shipping require an autonomous port?

Jan Egbertsen, manager - innovation, Port of Amsterdam, Netherlands

The development of autonomous ships looks like a technology push. Is the market really willing to use autonomous ships? And what do we as port authorities have to do to be able to accept an autonomous ship in the seaport? Perhaps the focus in this discussion should be on smart ships and smart ports? How can both developments push each other further?

Autonomy and shipping decarbonization

Stephen Brown, innovation manager, Shell, UK

The presentation will discuss how autonomy supports shipping decarbonization and plays a part in delivering the IMO 2050 ambition and the further ambition of zero-emissions vessels.

Finding the benefits in autonomous maritime transport

Jukka Merenluoto, ecosystem lead, Dimecc, Finland

Drivers for the use of autonomous technologies in the maritime business are cost savings, increased safety and sustainability. The presentation will give examples of all the drivers, and aims to explain the ways in which autonomous maritime traffic can improve the sustainability of maritime traffic by increasing its efficiency. The presentation will also detail the work that One Sea Alliance has done recently, such as participating in IMO work and the creation of international standards for MASS (maritime autonomous surface ships), etc.

Preliminary speakers include:

Collision avoidance

How can we trust autonomous vessels in congested water spaces?

Hannah Thomas, data science lead, L3Harris, UK

Little more than five years ago, 'autonomy' meant remote-control or a simple plotted route. Skip to today: autonomy refers to a vessel's ability to understand and react to its surrounding environment in a COLREG-aware manner. L3Harris's Autonomous Surface Vehicle (ASV) team is developing a suite of autonomous capabilities to enable different mission types in various operational environments. This presentation will uncover the 'autonomy toolbox' required for safe and reliable autonomous navigation, including object identification, collision avoidance and precise line following.

Nearshore collision avoidance solution development based on Vision AI

Dr Sewon Kim, principal researcher, Daewoo Shipbuilding and Marine Engineering Co Ltd, Korea

Most ship collision accidents occur in the nearshore area, such as ports and channels with high traffic. Conventionally, AROA (radar) and AIS are used for collision avoidance in an autonomous vessel. We have developed a computer-vision AI-based collision avoidance system for large merchant vessels. With regard to the collision avoidance controller, a change in maneuvering performance in the nearshore area is implemented. The container carrier case will be presented to prove the performance of the newly developed collision avoidance algorithm.

The path toward autonomy in offshore operations: collision prevention tool

Alexander Mordvintsev, product development manager, Navis Engineering Oy, Finland
Ilia Maslov, DP superintendent, Bourbon Offshore, France

Operations of dynamically positioned vessels in safety zones of offshore installations are among the most demanding marine activities. A variety of rules, guidelines and dependence on environmental forces keeps DP operators continuously stressed and leaves chances for human errors. A joint development project of Bourbon and Navis is intended to provide decision support for DP operators. It also aims to prepare the basics for unmanned operation of offshore supply vessels by optimal installation approach/escape routes, automated vessel capability, integrity checks (based on operation activity planning) and other methods. One of the most important features is a plan to collect vessels' big data.