



## Lim's presence felt in Athens

**IMO secretary general Kitack Lim may have missed attending Posidonia 2022 in person as he remained in London where the key meeting of the UN body's Marine Environment Protection Committee (MEPC 78) was being held in parallel with the exhibition.**

Addressing the MEPC meeting, which has been debating raising the IMO's level of ambition from halving GHG emissions by 2050 to targeting zero emissions by that date, in an intervention to mark World Ocean Day June 8, said MEPC had taken notice of developing countries concerns over raising emission targets as it could damage them economically.

"You have all reiterated your commitment from the last session to review the strategy for adoption by MEPC 80 in July next year, and in particular increase the levels of ambition, whilst taking due care of the needs of developing states, in particular small islands," said Lim.

At almost the same time as he was speaking in London, in a prerecorded video message, he repeated to delegates attending the Helmepea conference at Posidonia the industry's view that to "decarbonise a truly global industry global solutions are needed".

Lim said: "Our goal is to ensure shipping continues to operate safely, securely, and efficiently. Our goal is to ultimately decarbonise shipping and for that, we need to collaborate between all stakeholders to develop sustainable solutions. I very much hope for your support in our endeavours. We must continue our voyage together and leave no one behind."

## Looming seafarer shortage requires urgent action

**Greece's Minister of Maritime Affairs and Insular Policy, Giannis Plakiotakis, was the first to mention the seafarer crisis when he gave the keynote address at the Global Maritime Club Summit, organised by Seatrade Maritime, at Posidonia yesterday. Nowhere is the issue more pressing than in the corridors of the world's largest shipping nation and it is a topic that has been discussed repeatedly during the Posidonia event.**

However, the looming shortage of seafarers is clearly on the Minister's agenda as he noted a potential global shortage of 90,000 officers by the end of this decade. "The development of Greek shipping and the Greek flag is

inextricably linked to the availability of young seafarers who are trained and qualified, able to face the future challenges of shipping – namely decarbonisation, protection of the environment in general, digitalisation, cyber security, autonomous and semi-autonomous ships. In that context, I intend to propose a comprehensive plan for the enhancement of the marine education system by the end of the year," he declared.

Later in the day, delegates at the event heard industry experts give their views. The misery and plight of seafarers during the pandemic, including the denial of healthcare, working beyond contractual terms, and the prevention of crew changes by

governments, were all mentioned.

Despite all of this hardship, shipping's supply chains kept the world open throughout the pandemic even though serious congestion caused huge delays in key locations. Andreas Hadjipetrou, Columbia Ship Management managing director, noted that seafarers' profiles amongst the world's public have been raised. "We have learned all of us as an industry to respect the seafarers more; we already initiated a process where seafarers are being treated in a better way than before," he told delegates.

Guy Platten, Secretary General of the International Chamber of Shipping, was clearly in agreement.

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## DNV and Pleiades celebrate 100

**At Posidonia DNV presented Pleiades Shipping with a certificate recognising their new vessels as the first delivered to a Greek owner with the Cyber secure vessel notation. The presentation was a fitting milestone as DNV also celebrates 100 years of operation in Greece and topping 100 contracted vessels for the Cyber secure notation.**

As the number of integrated and connected systems and vessels increase, so too does the threat of remote attacks that can impact critical on-board control systems. These new threats make cyber security a vital tool to reducing risk and led to the release of DNV's cyber secure class rules and notations.

"The mission of Pleiades Shipping is to provide customers with safe, environmentally sound and efficient services," said Miltos Synefiyas, Technical Director at Pleiades Shipping. "We in Pleiades realised the values of digitalisation a couple of years ago. Today digital transformation still goes on and opens for new ways to further

improve both efficiency and safety. Today we see cyber security as a key element to ensure we can make use of this new technology in a safe and secure way and have taken with pleasure the decision to assign all our four new built vessels with additional voluntary cyber security verification to meet growing requirements of our charterers in this very demanding trading field."

"For DNV to continue to support the Greek maritime community as we have for the last 100 years, we need to be aware of emerging risks and constantly work to provide solutions to address them," said Ioannis Chiotopoulos, Regional Manager South-East Europe, Middle East & Africa. "This is why we are so pleased to be able to recognise the foresight of Pleiades Shipping, in opting for the cyber secure class notation. Last year, some 20% of DNV classed newbuilds chose to work towards an extra cyber security verification, and with new requirements incoming we expect this will continue to grow."



Jarle Blomhoff, Group Leader Cyber Safety & Security, DNV Maritime and Miltiadis Synefiyas, Technical Director, Pleiades Shipping Agents.



Lloyd's Register and Blue Sea Power have signed a Framework Agreement to provide classification and assurance services for three floating storage regasification, and power generation barges (FSRP) for the islands of Kos, Lesbos and Chios. The FSRP barges will use LNG and bio-LNG when it becomes available. They will also have the flexibility to support hydrogen blending in the future. Anna Apostolopoulou, Global Floating Offshore Installations (FOI) Director, Lloyd's Register, said: "This project, in partnership with Blue Sea Power, will provide affordable power with a rapid development schedule, helping to connect the electricity grids of the three islands and is a big step on the path towards alternative offshore energy."

– Continued from page 1 – **Looming seafarer shortage requires urgent action**

"One over-arching good thing that's come out of it is we now recognise seafarers as a vital component in world shipping," he added. However, while today's seafarers may be viewed more favourably as a result of their tireless commitments recently, there are still issues relating to retention, recruitment and training the men and women who will provide the seafaring labour force of tomorrow.

Henrik Jensen, Managing Director of Danica Crewing Services, highlighted that 15% of international seafarers come from either Ukraine or Russia. Many Ukrainians wanted to return home, he said, while some owners no longer wanted to employ Russians. Never before had he seen such a situation, he said.

Intercargo's Honorary Chairman, John Platsidakis, however, was not convinced by repeated warnings about a shortage of seafarers. "If there is a shortage, we would end up with laid-up ships, which is not the case," he declared. He conceded, however, that seafarer supply would inevitably tighten due to the war in Ukraine, and he noted that the industry should continue to focus on raising training standards."

John McDonald, Executive Vice President – Chief Operating Officer of

classification society, ABS, concurred. "I wholly agree that competency is something that we really need to start looking at in terms of crews and seafarers," he declared, referring also to shipping personnel at sea and ashore.

Following on from the morning session at which digitalisation in shipping had been a key focus, various participants pointed out that the twin transformations of digitalisation and decarbonisation will require new skill sets. "Those seafarers that are on board those vessels will have to have a whole new competency level," he said. The industry needs to have new seafarers coming through to train in these competencies and gain the competencies to meet the challenges to tomorrow.

WISTA President, Despina Panayiotou Theodosiou, told the audience: "In general as an industry, we need to create an attractive industry proposition to get young people, men and women to consider shipping. We not only need them because we need the number, but because the young people will have the energy for the transformation that our industry's going through, whether that's decarbonisation or digitalisation and they will still be here 15 or 20 years later."

## Surge of enquiry as EEXI and CII approach

**Yara Marine Technologies has noted a spike in enquiries from shipowners and operators seeking to equip their vessels with technology to comply with upcoming EEXI and CII regulations, due to enter force in little more than six months. The measures are designed to guide the maritime fleet towards lower carbon emissions without prescribing specific technologies to achieve the goals.**

However, Yara executives note from interest shown this week that operators are keen to make choices ahead of time and prevent a bottleneck for retrofits or newbuild installations.

As a long-time supplier to the sector, Yara Marine Technologies is aware that a one size fits all approach is not suitable for the fleet, which has a variety of needs and restrictions.

Therefore, the company offers a portfolio of options ranging from the immediate reduction of fuel consumption on any vessel, using its FuelOpt technology, long-term goals like data gathering for optimising

operations, via its Fleet Analytics setup, and shore power, via its turnkey setup. The company has also developed a wind-assisted propulsion offering named WindWings, that was developed in partnership with BAR Technologies and is on display at stand 4.303.

Mikael Laurin, Head of the Vessel Optimization Business Line at Yara Marine Technologies, points out that many of these systems can be used in conjunction with each other to gain maximum benefit.

"Solutions selected for the EEXI and CII should comply with several requirements at once while remaining easy to use for crews on board," he told Posidonia Today.

"They should ideally address both short and long-term requirements to ensure cost-effectiveness and operational benefits for shipowners and operators.

We've made it a priority to support our customers with immediately viable solutions that maximise overall cost-efficiency while also reducing the time period required for vessel upgrades," he said.

## List of Confirmed Conferences & Seminars at Posidonia 2022

|          | Organiser  | Event Title   | Posidonia Venue                          | Time        | Contact Organiser  |
|----------|--|---|--|-------------|--|
| FRI 10/6 | Young Executives & Students (YES) Forum  | YES to Shipping Forum 2022  | Conference Hall                          | 10:30-17:00 | <a href="mailto:info@yes-forum.com">info@yes-forum.com</a>   |
|          | Metropolitan College/ Maritime Academy   | 4th International Conference on Maritime Education - The impact of geopolitics on the future of shipping  | Seminar Room 1B - Sponsored by Admiralty | 10:45-14:30 | <a href="mailto:vapostolopoulou@mitropolitiko.edu.gr">vapostolopoulou@mitropolitiko.edu.gr</a>   |
|          | National Technical University of Athens  | Port Facilities for Small Crafts and Yachts in Greece   | Seminar Room 2A                          | 10:45-12:30 | <a href="mailto:dglantsi@mail.ntua.gr">dglantsi@mail.ntua.gr</a>   |
|          | SPARES CNX   | The answer to Inventory mis-management: A Data-Driven Solution that creates Value out of Chaos  | Seminar Room 2B                          | 10:45-12:30 | <a href="mailto:mohit.khemani@sparescnx.com">mohit.khemani@sparescnx.com</a>   |
|          | Union of Greek Shipowners  | Press Conference  | Seminar Room Central                     | 11:00-13:00 | <a href="mailto:posidoniapress@astrovert.gr">posidoniapress@astrovert.gr</a>   |
|          | Turku University of Applied Sciences   | MarISOT - Next Generation Training in Maritime Safety   | Seminar Room 1A                          | 12:45-14:30 | <a href="mailto:uha.saarinen@turkuamk.fi">uha.saarinen@turkuamk.fi</a>   |
|          | University of the Aegean-Department of Shipping Trade and Transport                | Performing amidst high uncertainty: shipping resilience   | Seminar Room 2A                          | 12:45-14:30 | <a href="mailto:mlambrou@aegean.gr">mlambrou@aegean.gr</a>   |
|          | Alpha Marine Consulting (AMC) in collaboration with University of Birmingham (UoB) | Ship Decarbonization Technologies & Human Factors Development: A Zero Accidents - Zero Emissions Sustainability Goal                              | Seminar Room 2B                          | 12:45-14:30 | <a href="mailto:posidonia@alphamn.com">posidonia@alphamn.com</a>   |
|          | Teamworks & Online Data  | The contribution of Digital Technologies to the development of Shipping and MultiModal Transports: Strategies, Policies, Actions and Developments | Seminar Room Central                     | 13:00-17:00 | <a href="mailto:p.triantafyllou@teamworks.gr">p.triantafyllou@teamworks.gr</a><br><a href="mailto:info@teamworks.gr">info@teamworks.gr</a> |
|          | Economic Development Board Mauritius   | Mauritius: Your Next Destination for Maritime Services and Ship Registry  | Seminar Room 1B - Sponsored by Admiralty | 14:45-16:30 | <a href="mailto:rachna.ramkhalawon@edbmauritius.org">rachna.ramkhalawon@edbmauritius.org</a>   |

## RINA reports strong 2021 results

**Classification society RINA booked revenues of Euro 533 million in 2021, an increase of 14% over 2020. Net profit for the period increased from Euro 4.9 million in 2020 to Euro 8.1 million last year. The net financial position fell to Euro -139.7 million, reducing leverage to 1.92, RINA said in a statement.**

The positive trend continued through the first quarter of this year, with revenues of Euro 141 million and an orderbook of Euro 207 million. The company is on track to deliver consistent results this year, the classification society indicated, with 71% of the volume forecast for 2022 already booked. Despite the current geopolitical complexities, 2022 has already presented opportunities in renewable energy, digitalisation, cyber security, and infrastructure – sectors already identified as strategic priorities, RINA noted.

President and CEO, Ugo Salerno, commented: "These figures are by no means a point of arrival, but are the result of a growth path that RINA is pursuing with a clear vision, based on ESG principles. Our expansion plan continues both externally, thanks to several M&A projects that are in the pipeline, as well as internally with the support of an important recruitment plan that will lead us to hire over two thousand new colleagues over the next two years, half of those in Italy."



Led by Spyridon Zolotas, (left) head of RINA's Piraeus office and region, it was all smiles on the classification society's Posidonia stand when the results were announced.

## Engine firm launches EEXI compliance software

**Winterthur-based engine builder, WinGD, has presented a software-based Engine Power Limitation (EPL) system at Posidonia 2022 to provide a convenient way of ensuring compliance with the IMO's EEXI regulations, due to enter force in January. The system is applicable to all WinGD, Wärtsilä, and Sulzer X, X-DF, and RT-flex two-stroke engines operating with UNIC or WECS-9520 engine control systems.**

The setup is likely to prove an attractive option for many ship operators with engines of these types because it can be installed during a single port stay with no engine downtime. This will enable operators to minimise delay and bypass pressure on repair yard space.

The new EPL system complements the engine company's ecosystem of future fuel capability, hybrid power, and digital optimisation, supporting owners in their choice of the most flexible, practical and cost-effective decarbonisation initiatives.



WinGD's Operations Director, Dr. Rudlof Holtbecker, said: "Some EEXI solutions could involve high retrofitting costs or have a knock-on impact on operations or engine performance. A software-based EPL from the engine designer is the most economical way to meet the new requirements while safeguarding reliability and minimising disruption to the fleet. This solution leverages our deep understanding of engine design and operating experience. It represents an important step in greenhouse gas emissions compliance for WinGD engine users, providing a compliant baseline engine output from which operational emissions can be further reduced in line with evolving regulations."

## Capital to work with class on decarbonisation

**Capital Ship Management Corp. and Lloyd's Register (LR) are to try out new biofuels in a pilot project on board the Capital-managed 300,000dwt VLCC, Apollonas. LR Maritime Performance Services (MPS) team will undertake a risk assessment of the operational impact of biofuel and oversee the development, implementation and calculation of the emissions monitoring programme.**

The MPS team will also provide third-party verification of the complete trial. Meanwhile, the classification society's Fuel Oil Bunker Analysis Services – FOBAS – will carry out biofuel quality assessment and characterisation to cover all aspects of the new fuel management process.

Commenting on behalf of the Greek company, Chief Technical Officer, Nikolaos Vaporis, said: "We support research on various decarbonisation solutions such as the use of biofuels, as part of our commitment to contribute to the industry's carbon footprint reduction, in line with the IMO greenhouse gas emissions (GHG) reduction agenda. We are especially pleased to participate in this project, as it is an opportunity to work with LR and remain at the forefront of environmental innovation."

LR's Nick Brown, CEO, commented: "There is a keen interest in the shipping industry to learn more about the use of biofuels as we navigate the IMO's GHG ambitions, specifically the potential for emissions reduction, compatibility with existing bunkering technologies and associated costs. We are delighted to be working with Capital on this pilot project to test the safe use of biofuels in shipping. We hope to build on years of experience and utilise unmatched expertise and analytical capabilities in fuel testing to advance the wider industry's search for low-

to-zero carbon fuels and technologies."

Meanwhile, separately, Capital is to adopt the ABS My Digital Fleet which uses AI-driven insights to advance sustainable operations and reduce operational risk. Environmental insights provide

visibility into the impact of daily decisions on a ship's carbon footprint and identify possible options for improving performance, the classification society explained.

Paul Sells, CEO and President of ABS Digital Solutions LLC, commented: "We are proud to be able to support Capital on its sustainability journey. My Digital Fleet is designed to support forward-thinking shipowners and operators, such as Capital, towards meeting their decarbonisation, digitalisation and wider sustainability ambitions. Through advanced analytics, the platform provides unprecedented levels of insight into an individual vessel or fleet's environmental and operational performance enabling proactive decarbonisation decisions to be made every day."





## Commissioner Valean briefed on Greek port developments

**A very busy European Commissioner, responsible for Transport, Adina Ioana Vălean was brought up to date on developments in the Greek port sector during a joint meeting in the Greek Parliament of the Committees of Production and Trade and European Affairs.**

During the meeting, the country's Infrastructure and Transport, minister, Costas Karamanlis, speaking about the strengthening of the Greek railway and the electrification of railways and ports, said Greece is actively participating and with clear positions in the process for the review of the Trans-European Transport Network (TEN-T). "We have formulated the position of our country and seek the inclusion of the port of Alexandroupolis in the extensive trans-European network," he said, adding "I think that now with the energy crisis we all recognise in Greece and Europe the great importance of the port of Alexandroupolis. The port is already being used by the NATO alliance, as well as by other sources, to connect isolated areas and to upgrade this whole area in terms of energy."

Regarding the port of Alexandroupolis, it was noted that, after systematic and persistent efforts of the Government, the European Commission welcomes its integration into the extensive Trans-European Transport Network. In this way, the port's role will be upgraded to strategic importance, attracting cargo from major international markets while at the same time being able to receive co-financing from EU financial instruments and funds to improve its infrastructure.

Also, for reasons of regional development and cohesion, Karamanlis stressed that it is expedient to develop a complementary branch of the European Corridor along the Adriatic-Ionian coastline.



Commissioner Adina Ioana Vălean had full programme during her Posidonia visit.

## Samsung HI gets AiP for ammonia-fueled box ship

**FABS has granted approval in principle (AiP) to Samsung HI design for an ammonia-fueled neo-panamax container vessel. Presented at Posidonia, the AiP confirms the design has been reviewed by ABS against the requirements outlined in the classification society's rules.**

"This ammonia-fueled vessel represents a significant step forward in the industry's desire to realise the emissions reduction potential of ammonia as fuel, and we are proud to use our experience to support it. Ammonia presents a specific set of safety and technology challenges, and ABS is committed to leading the industry in supporting its safe adoption at sea," said Patrick Ryan, ABS Senior VP, Global Engineering and Technology.

"Ammonia-fueled propulsion ships are one of the sustainable solutions that can realise the carbon-neutral goal of the shipbuilding industry," said Young-kyu Ahn, head of Samsung Heavy Industries shipbuilding sales engineering team.



Ezekiel Davis, ABS VP of Regional Business Development in Europe, and Seongil Oh, Samsung HI Executive Vice President and CMO, at Posidonia.

"Samsung Heavy Industries will lead the technology by focusing on research and development capabilities."

## BV, Laskaridis and METIS pilot SMART project

**Bureau Veritas (BV), Laskaridis Shipping and smart tool provider METIS Cyberspace Technology have embark on a pilot project to develop and apply a new BV SMART 3 Class notation covering the use of augmented data in ship operations.**

Modern ships increasingly use smart systems designed to improve their operational efficiency. As part of its strategy to support maritime digitalisation, BV has developed a framework of SMART notations for ships which provide consistent and uniform standards for the 'smart' techniques used to monitor and improve fleet performance.

In a new 'Smartship' pilot project, BV is working with Laskaridis and METIS to develop a range of additional class notations adapted to the latest advances in digitalisation technology, with a focus on the augmented ship. The SMART 3 notation will also cover ship to shore connectivity, remote decision support and remote operations.

Paillette Palaiologou, VP for Southeast Europe, Black Sea & Adriatic Zone at BV Marine & Offshore said: "Digitalisation

is transforming the maritime industry, bringing new challenges and opportunities. The new range of notations will help advance the journey towards more digitalised and autonomous ships. We are delighted to partner with Laskaridis Shipping and METIS Cyberspace Technology on this new project. Collaboration is essential to help progress new technologies and to support the industry transition."

Laskaridis Shipping has been at the forefront of applying the advanced real-time monitoring solutions which help to optimise ship efficiency and minimise environmental impacts.

"We are very proud to be a partner in the highly innovative SMART certification project," said George Christopoulos, Chief Operating Officer, Laskaridis Shipping. "We have committed to being at the forefront of maritime digitalisation based on the gains these technologies deliver in operational excellence and enhanced ship sustainability."

METIS Cyberspace Technology SA specialises in data acquisition, real-time performance monitoring and intelligent analytics for the maritime



Paillette Palaiologou: "Digitalisation is transforming the maritime industry, bringing new challenges and opportunities."

industry, using machine learning and artificial intelligence.

Mike Konstantinidis, CEO, METIS, said: "Collaboration in this part of the SMART certification programme confirms BV's recognition of METIS intelligent analytics as fully ready to secure the rewards of shipping's digital future. We would also like to acknowledge the vital role forward-thinking shipping

companies like Laskaridis Shipping play in delivering the true benefits of maritime digitalisation."

Drawing on BV's expertise in the certification, implementation and survey of data infrastructure, the new SMART 3 class notation is expected to provide added value for owners, shipyards and manufacturers of digital solutions for the maritime industry.

# Hull coatings now count more than ever

**Hull resistance has been a major issue facing ship operators for years, but in the face of new emission regulations from the IMO due to enter force next January and today's sky-high fuel prices, the challenge has never been greater. Coatings company, Hempel, has been demonstrating during the Posidonia week how advanced hull coatings can contribute to operational efficiency and sound ratings as a new emissions framework is adopted.**

The Danish coatings manufacturer has been showing off its Hempaguard range which, it claims, can help owners and operators secure good carbon intensity indicator (CII) scores for their ships in the long term. The CII, which applies to ships of more than 5,000 gross tons from next January, is designed to measure a vessel's operational efficiency in terms of cargo shipped and grams of carbon dioxide emitted per nautical mile.

Hempel points out that hull coatings will become increasingly important over the balance of this decade. That is because each vessel will start with a reference CII rating between A and E, where A is best, but a ship's rating will have to improve each year as CII assessments become stricter over the second half of the decade.

"Maintaining a consistently good score of between A to C will soon be a commercial imperative," Hempel explained, "as IMO is calling on ports and other stakeholders to offer incentives to the owners/operators of low-emissions ships. Further, banks and ship financiers are also rated on how their portfolio is aligned with decarbonisation."

Analysis undertaken by Hempel has indicated that engine power limitation (EPL) or slow-steaming is one easy way to reduce emissions. However, for many existing ships, speed would have to be reduced to such an extent that it would fall below charterparty requirements, the coatings company concluded. So other steps will be necessary through the retrofitting of energy-saving devices.

That is why hull coatings are now more important than ever. A low-friction hull



coating offers the potential for a CII improvement, Hempel said, citing its Hempaguard range, incorporating Actiguard® technology. This combines a smooth silicone surface with non-stick properties that reduce biofouling.

Hempel notes one significant change as a result of the new IMO regulations. Depending on the type of charter contract, high-performance hull coatings often benefit ship charterers because fuel costs are for their account, even though it is owners and operators who pay for products and their special application. From January, however, this latter group will have a direct interest in ensuring the very best CII scores for their ships to ensure that they remain attractive to charterers and customers.

## Restis company opts for PPG hull coating

**Enterprises Shipping & Trading SA (EST) has chosen PPG Sigmaglide® 1290 biocide-free silicone fouling release coating to minimise hull resistance and contribute towards carbon emission reductions, the Victor Restis-led coatings company has announced. The 49-year-old company operates a fleet of about 40 ships, comprising bulk carriers and tankers.**



Cooperating with several marine research institutes, PPG undertook several studies to measure the power and speed impact on vessels retrofitted with the fouling release coating. The tests revealed that the coating provided a 20% reduction in power consumed at design level, PPG said, and a reduction of up to 35% in carbon dioxide emissions compared with traditional antifouling coatings.

EST's findings support these figures. The shipping company's vessels retrofitted with energy-saving technologies are showing a power reduction of more than 20%. The PPG coating is a major contributor to this performance improvement.

George Sarris, President of EST, said: "EST is a pioneer in energy-efficient operations and is committed to

minimising its environmental impact. Our investment in PPG Sigmaglide 1290 coating is a major contributor to our goals of achieving the maximum efficiency potential of our fleet and not meeting but exceeding the carbon reduction goals set by the International Maritime Organization.

Speaking on behalf of PPG, segment director, newbuilding and drydocking, Ariana Psomas, commented: "PPG Sigmaglide 1290 silicone coating can help shipowners comply with IMO regulations by contributing to a significant speed improvement and increased operational efficiency. The coating's ultra-smooth surface enables vessel operators to improve their speed and save on power consumption while also resisting even the most difficult fouling conditions."

## Jotun – HullKeeper global roll-out

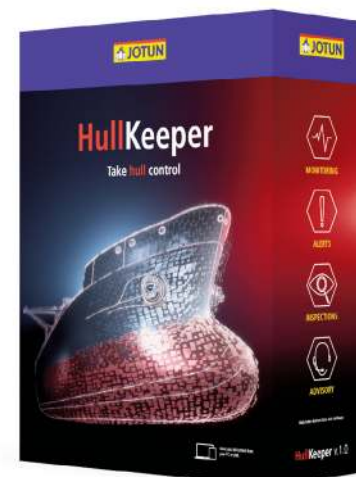
**Norwegian coatings manufacturer, Jotun, chose Posidonia to extend its HullKeeper roll-out to the global market. The HullKeeper setup, designed to keep hulls clean, reduces fuel burn and emissions, and limit the transfer of invasive species, has been tested by various ship operators. Roll-out of the technology comes at a key moment for ship operators – not only do they face new regulations on carbon efficiency and emission in a few months' time, but they must also contend with dramatic increases in fuel prices.**

The coatings company is keen to stress that the HullKeeper system is more than a regulatory and carbon compliance tool. Up to 9% of fuel consumed annually by ships can be used to overcome the effects of biofouling. This applies equally to ships using new fuels where emission reduction is not the key focus, Jotun said.

Explaining the system, Jotun's Global Digital & Data Director Dr Andreas Krapp, said: "The four part HullKeeper programme combines Jotun's trusted analytical and technical services ... with advanced digital capability and

remotely operated vehicle inspections. With HullKeeper, we offer customers unique hull performance support services based on solid and trusted data and advice regardless of the chosen coating.

"The HullKeeper programme utilises Jotun's in-house developed fouling risk algorithm and combines data from different sources to make fouling control and efficiency predictable," Krapp continued. "Insight into developing issues as they begin to occur allows for planned corrective actions and, as more information and data is accumulated, best practices can be adopted across the whole fleet."





## Don't repeat mistakes from Ballast Water Convention, petitions Ecochlor CEO

**Ecochlor has been one of the most successful ballast water management system (BWMS) designs, but Andrew Marshall, CEO of the company, has a warning about future environmental legislation. "Let's be candid: [The Ballast Water Management Convention] was a piece of legislation that tried to force shipowners to do something they didn't want to do," he told Posidonia Today. "It was something that could never make them any money, only cost money."**

"I don't think anyone in their wildest dreams imagined that it was going to take 12 years to ratify the Convention. The average time period for ratification was around five or six years."

Ecochlor is one of the original ballast water management systems, with the first installation made in 2003. It is the only extant system to use chlorine gas as a disinfectant – a distinct process from using an electro-chlorination system to generate hypochlorite and one that has much lower power requirements.

Marshall told Posidonia Today that many electro-chlorination (EC) and ultraviolet (UV) disinfection systems have proven to be unfit for the vessels they have been installed on. "Not every technology is suitable for every type and size of ship – ours is bad on small ships," he said. "On a ship of less than 35,000dwt, there is no point."

This, he explained, is because of the footprint, which is larger thanks to the storage of active substances on board. Generally, UV systems are selected for smaller ships, while EC systems are chosen for bigger ships. But the initial confusion surrounding the Ballast Water Management Convention means that many ships have been fitted with the wrong technologies, he said.

"You still get owners making appalling selections today. Everyone has talked about the retrofit bubble which will come to an end in 2025. But I think there'll be a retrofit-to-the-retrofits bubble," he said.

Ecochlor has itself replaced "several" systems which could not perform adequately, and there are a great many ballast water manufacturers which have gone bust, thanks to the fact that it took such a long time for the Convention to be ratified, and for system orders to start to come in.

The failures of the Ballast Water Management Convention should be a lesson for the future, Marshall said, but he also referred to scrubbers. "There was a fuel price delta which provided the financial incentive to owners to embrace an environmental technology. Then what happened – that delta closed. A lot of orders got cancelled. A lot were installed, and we promptly found out these things weren't fit for purpose.

"These discussions should have been had before. You told shipowners to go and spend millions of dollars buying and installing equipment, you must be willing to advise them.

"Now, you've got alternative fuels, alternative technologies. Bio fouling. CO<sub>2</sub>. The second generation of scrubbers, because everyone has learned lessons from the first generation. But let's not hit owners with everything all at once.

"What shipowners can't do is what they did with ballast water treatment – even though in large part, what they did was justified. They can't just say 'it's all too difficult, we just won't do it'. They have to engage – because they're just going to be told 'it has to be done', and somebody has to make it happen."



## MEP – scope to cut port emissions

**RightShip's new Maritime Emissions Portal, launched earlier this year, is designed to support ports and terminals of all shapes and sizes as they seek to manage ship emissions and the resulting impact on local communities. So the digital setup is as relevant for tiny ports and terminals scattered around Greek islands as for the bustling Port of Piraeus.**

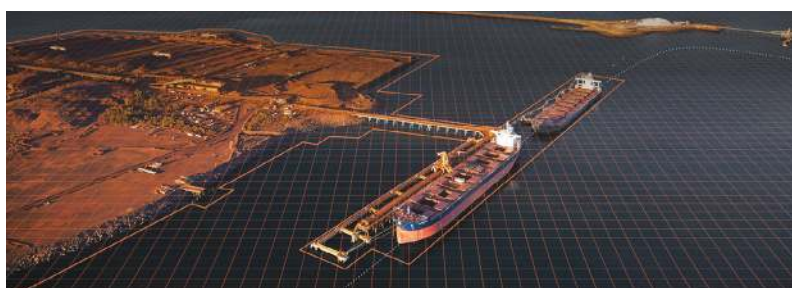
The company, which espouses a vision of a global maritime industry that causes zero harm, has developed the world's largest energy efficiency vessel database, covering the technical details of more than 50,000 ocean-going ships and more than 150,000 other vessels including tugs, pilot boats, ferries, fishing vessel and workboats.

Senior Sustainability Adviser, Tam Pham, explains that the company works closely with port authorities to ensure that they understand ship

emissions data by using emission heatmaps and zoning technology. Action plans can then be designed to tackle the issue and cut harmful emission levels.

Pham concedes that compliance is a major issue faced by many ports as they address the air quality issue. However, increased pressure from surrounding communities and more proactive measures introduced by ports to monitor and track emissions is helping.

Meanwhile, some port authorities have set up speed reduction zones while others offer emission reduction incentives and are setting up shore power networks. In this context, fixed and floating offshore wind and solar are clearly on the agenda in Greece, having been mentioned many times over the course of the Posidonia week. Such facilities would enable ships not to fire up their generators in port at all.



## LR grants AiP for methane abatement system

**A new methane abatement technology developed by Daphne Technology (DT) has been granted Approval in Principle (AiP) by Lloyd's Register (LR). The SlipPure system, a technology that tackles methane slip, will be suitable both for existing LNG carriers as well as ships using LNG as fuel. The AiP paves the way for the technology to proceed to pilot applications prior to further development and full commercialisation.**

Methane slip, a process by which unburnt methane from the combustion process leaks into exhaust gas, is a challenge for engine developers although significant progress in its reduction has been made recently. However, it remains an issue because methane is estimated to be more than 25 times as potent as a greenhouse gas than carbon dioxide. It therefore remains an issue for ships using LNG for fuel.

However, it is a particular challenge for the operators of older LNG carriers because these vessels are often not equipped with efficient boil-off management systems. Younger vessels have reliquefaction systems to ensure that boil-off gas can be used as fuel.

Mario Michan, CEO of Lausanne-based Daphne Technology, commented: "This is an important milestone for Daphne Technology. The Approval in Principle from LR demonstrates that our technology meets international safety standards and regulations, bringing us a step closer to deploying and commercialising our SlipPure system. We believe our technology can help address the climate challenge in the maritime and other hard-to-decarbonise industries."

LR's Panos Mitrou, Global Gas Segment Director, said: "LR is proud to award Approval in Principle to Daphne Technology for their new SlipPure technology, a significant milestone in methane abatement technology development. Methane emissions constitute a key risk to the gas sector and its shipping supply chain. Mitigating this remains essential to climate alignment and longevity of many LNG carriers and LNG-fuelled ships. Retrofits of this technology in ships, in the future, would allow them to benefit from the full potential of greenhouse gas savings of LNG."





## Posidonia 2022: Many reasons to smile



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