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Developing future leaders

NAYTIKA XPONIKA

A look at the shipyard industry's future

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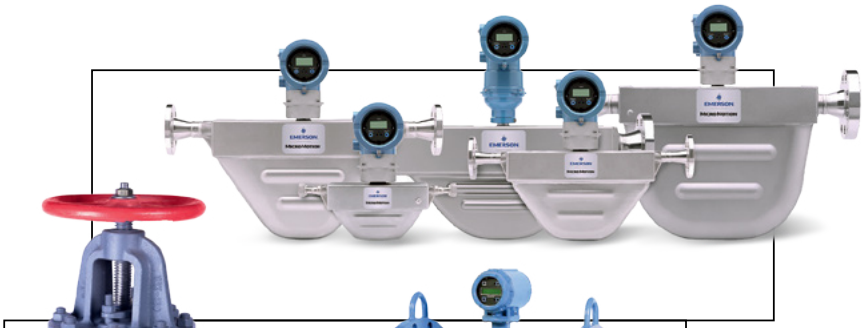

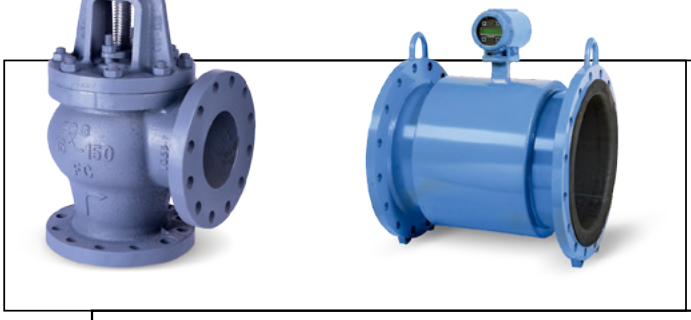

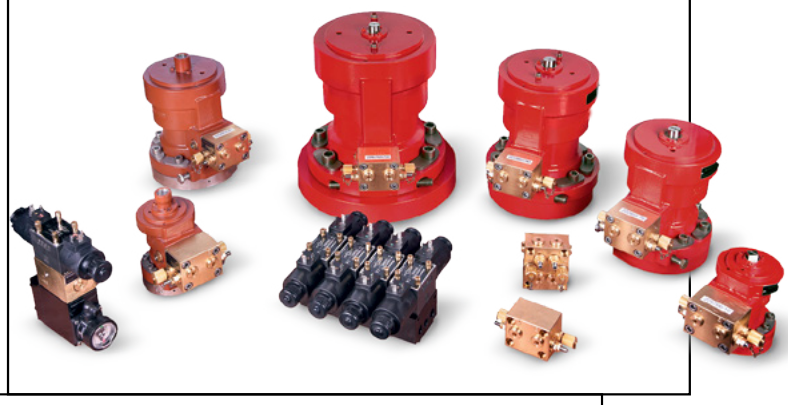

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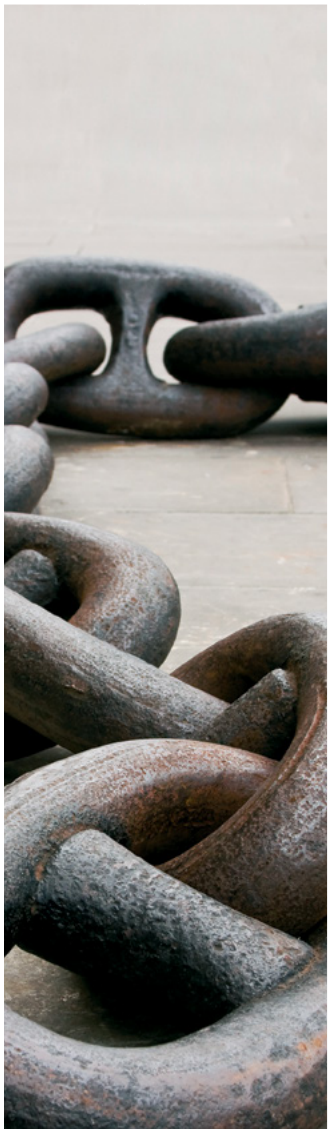


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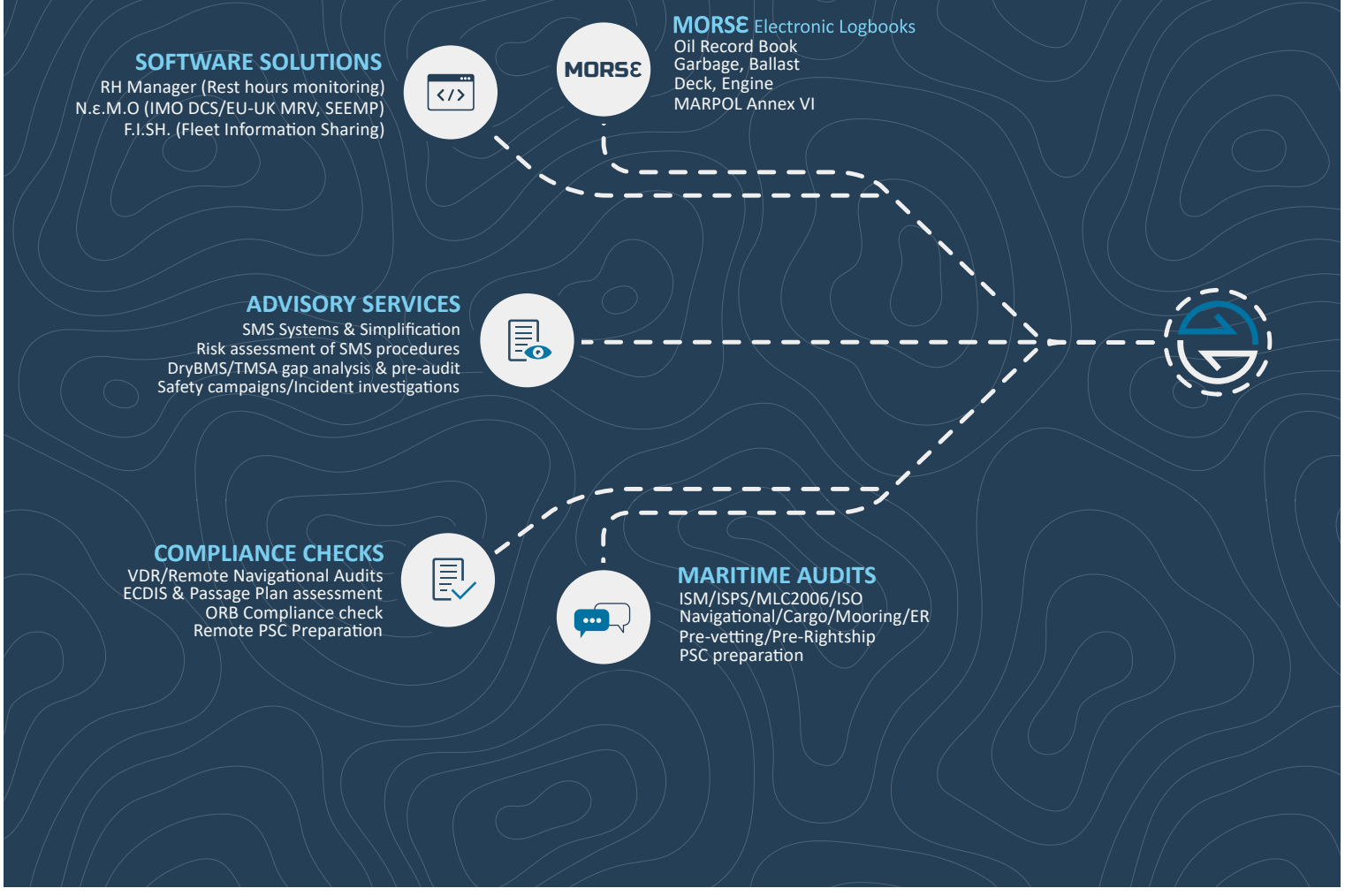

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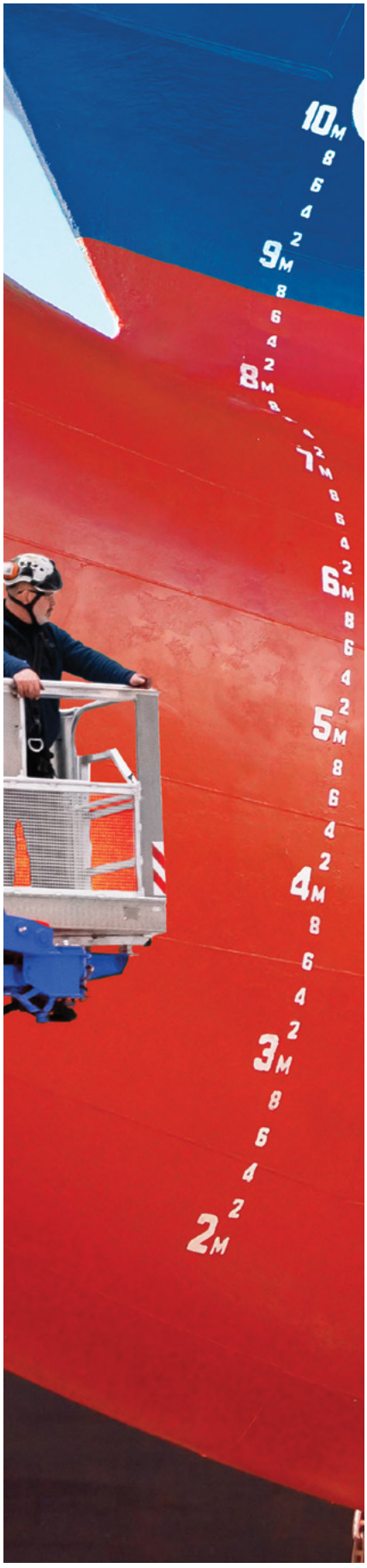

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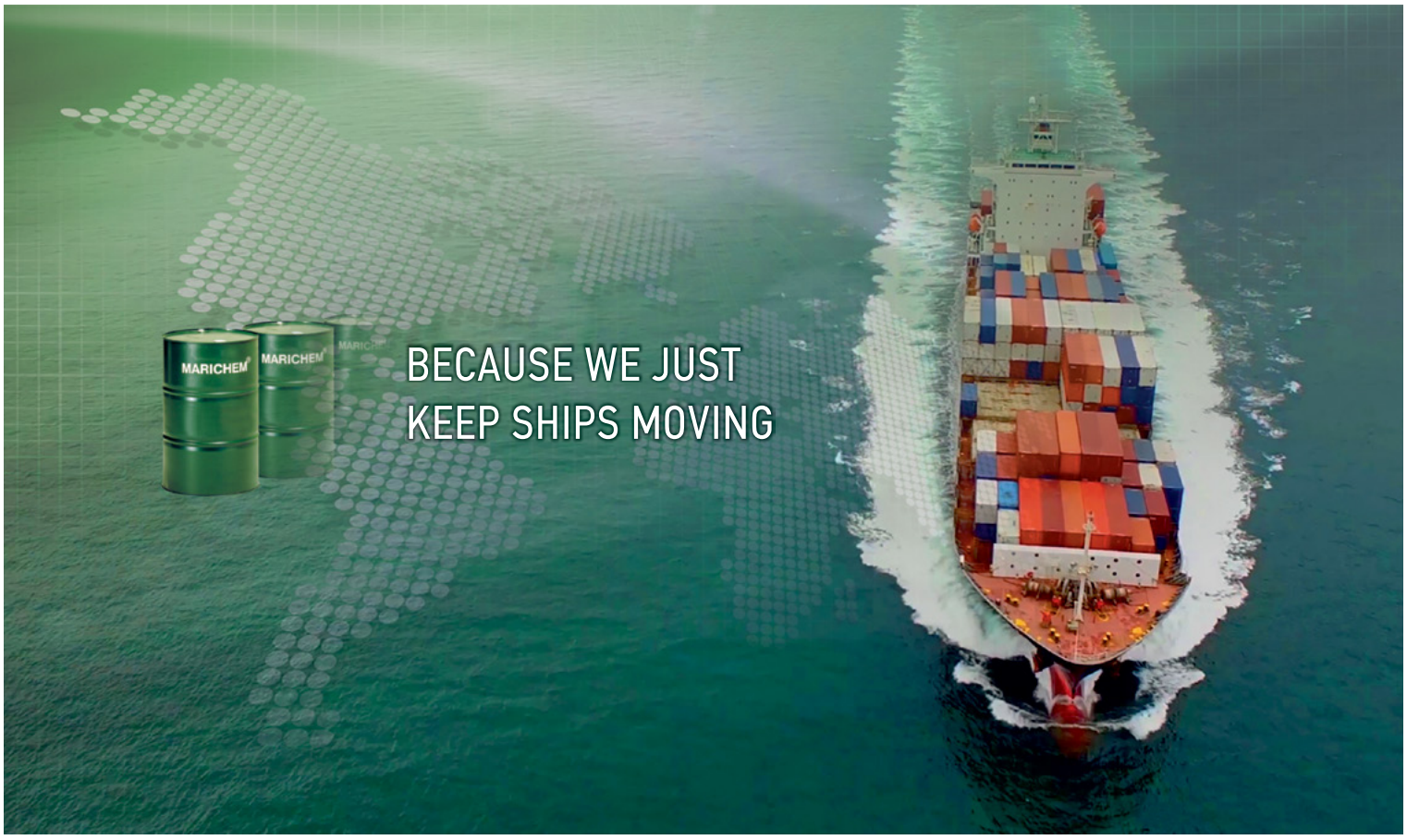

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European shipping is facing fundamental changes, mainly in terms of environmental regulations, while the war in Ukraine is redefining the industry's status quo. In this interview, Mr Philis refers to the EU Emissions Trading System, the collective voice of European shipowners on key maritime issues, and the impact of recent geopolitical developments on European shipping.

SHIPPING IS GOING THROUGH A PHASE OF FUNDAMENTAL CHANGE

Philippos Philis,
President of the European Community Shipowners' Associations (ECSA)

in a discussion with Ilias Bisias

❶ **Do you think that the ETS, as proposed by the European Institutions, is the best solution for the sustainability of European Shipping? Are the recent proposals submitted by Members of the European Parliament in the right direction?**

Although European shipowners would have preferred an international solution, we recognise that shipping should contribute its fair share to address the climate crisis at the EU level as well. We welcome the increased climate ambition of the 'Fit for 55' package but we have criticised the lack of consistency and have put forward workable solutions. One of the shortcomings of the ETS proposal has been that it does not address the responsibility of the entity that takes operational decisions affecting the CO_2 emissions of a vessel. We have worked hard over the last year to convince the Parliament, the Council, and the Commission about the need to make the commercial operators responsible for the costs of the ETS. Our proposal is environmentally consistent with the overall climate targets of the EU and will encourage operators to improve the operational efficiency of the vessel, use cleaner fuels, and reduce emissions.

It is remarkable that both the Council and the Parliament support a similar position on the mandatory transfer of the costs to the commercial operators, which has been one of the major points we have raised. We need all hands-on deck and proper implementation of the 'polluter-pays' principle for the energy transition of the sector.

Another element missing from the ETS proposal was the use of the revenues. Allocating the revenues to the sector is essential for bridging the price gap between clean and conventional fuels. About 80% of the current ETS revenues are used for the energy transition of other ETS sectors and we need to see the same happening in shipping. The Parliament has fully supported our proposal to set up a sector-dedicated fund and has earmarked 75% of the revenues generated by the shipping allowances to the energy transition of the sector. The Council has supported special financing calls under the ETS innovation fund. However, we believe that this commitment does not go far enough to support innovation and to bridge the substantial price gap between conventional and clean fuels. We, therefore, encourage the governments to go a step ahead and to support the earmarking of the ETS revenues for the energy transition of the sector, as proposed by the Parliament.

❷ **Is the voice of European shipowners sufficiently heard in the international and regional fora of London and Brussels?**

Some critics may say that the shipping sector is conservative and inward-looking. I would rather say that shipping is in a transition and is going through a phase of fundamental change. The sector has dealt successfully with one crisis after another and has become more extroverted, more open, and more influential. As a renowned media outlet put it after the Parliament's vote on the ETS earlier this year: "shipping spoke and people in Brussels have listened to the sector".

It is essential to understand the dynamics and the new emerging political landscape. Shipping is at the top of the political agenda, and we need to highlight the great contribution of shipping to global trade and to the competitiveness of the European

economy. Shipping is the means for Europe to trade with the rest of the world, grow, and create wealth for its people. Shipping connects Europe with the rest of the world, and this is not always well-understood by all EU policy makers.

As I mentioned before, we are in a transition phase, and it will take a lot of hard work to make our voice heard stronger and to make our sector more impactful. A lot of policy initiatives are in the pipeline, which will change the sector for good. It is a make-or-break moment for the competitiveness of the industry.

❸ **Some critics suggest that European shipowners are divided in their environmental goals and do not share the same collective aspirations. Does this criticism still ring true?**

European shipowners are not divided. I would say they are united in diversity. ECSA has the privilege to represent associations from 19 EU/EEA countries and all segments of shipping from bulk carriers to ferries, container ships, tankers, and cruise ships. We are able to tap into our members' diversified expertise and come up with workable solutions.

There are always different views, different business models, and different working cultures. This is normal and it exists in other sectors of the economy as well as in the national public administrations. It is not an easy task to understand where everybody comes from, bypass misunderstandings, and find common ground. But this is exactly what happened in ECSA on the environmental files which are probably one of the most difficult to find consensus.

ECSA and its members discussed the proposed legislation line by line, examined the technical details and their implications, and have come up with clear positions and a clear message addressing our requests to the policymakers. This message has been supported by all members of ECSA.

Different approaches are often overplayed but the fact is that the sector has been united in our main positions towards policymakers. We have so much in common and also much to lose if we don't stick together. ECSA is the focal point of the sector in Brussels, and this is reflected in our recent successes in the policy files.

European shipowners are not divided. I would say they are united in diversity.

❹ **What have been the effects of the ongoing conflicts in Ukraine for European Shipping?**

The ongoing war has brought significant uncertainty for shipping operations, as European shipowners strive to comply with the fast-changing EU and international sanction regimes. In particular, ECSA has been active at the EU level together with the European Transport Workers Federation to highlight the challenges emerging concerning seafarers' safety in conflict areas in addition to issues emerging with crew changes, as Ukrainian and Russian seafarers make up a significant percentage of our vessels' crew. Ensuring that seafarers, and in particular Russian seafarers, have access to their paid wages is increasingly challenging due to the financial restrictions. Seafarers are essential workers, and it is key that they are not "penalised" for performing their duties, irrespective of their nationality.

❺ **What are your views regarding the EU Coordinated Maritime Presence in Africa? Are these costly European initiatives in the right direction for the security of shipping in the Gulf of Eden?**

ECSA fully supports the EU's activities in the Gulf of Guinea, including the Coordinated Maritime Presence (CMP) mechanism launched in January 2021 and recently extended until 2024. Since its introduction, the CMP has been an effective tool to coordinate Member States' resources in the region, as well as to build cooperation and capacity with the coastal states. It is however key that the Member States continue to allocate adequate assets to strengthen maritime security in problematic areas. Regarding the Gulf of Aden, ECSA has welcomed the recent launch of the CMP in the North-Western Indian Ocean as we believe it can improve coordination between the EU initiatives in the area and with regional and international stakeholders. Importantly, when launching the NWIO CMP, Member States recognised the importance of Operation ATALANTA and the role it continues to play for security in the region. European shipowners support the continuation of the operation's mandate as it is key to ensuring stability and deterrence in the region but also for information sharing.

❻ **Why do we still see a reluctancy in many young Europeans to pursue a career at sea? How can the social image of shipping be improved by all maritime stakeholders?**

The public's lack of awareness about our industry is still an issue, with maritime transport and shipping often associated with adverse publicity. Promotion of the industry must highlight the vital, dynamic, and far-reaching opportunities that careers in maritime sector can offer and build advocacy tools to raise awareness with young people. Maritime careers need to be showcased in a way that is relevant to the expectations someone has of a modern lifestyle. EU-funded projects developed by ECSA such as SkillSea (which aims to develop a sustainable skill strategy for Europe's maritime professionals for digital, green, and soft management skills) and WESS (which supports the European shipping industry's initiative to attract and retain the workforce) are undeniably aimed at this purpose.

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The CEO and Chairman of the Board of Directors of Safe Bulkers Inc. shares his views on the impact of the war on the dry bulk sector. Mr Hajioannou also discusses the outlook of the Greek economy and the green transition of the shipping industry.

THE SUPPLY FUNDAMENTALS REMAIN POSITIVE FOR THE DRY BULK SECTOR

The CEO and Chairman of the Board of Directors, Safe Bulkers Inc., **Polys V. Hajioannou,** in an exclusive interview

with Giannis Theodoropoulos

❶ **What developments do you expect in the dry bulk shipping routes, given the ongoing geopolitical conflict in the Black Sea?**

The recent agreement between Ukraine and Russia to partially resume grain exports is expected to boost global supplies and help lower grain prices. However, given the limited duration of the agreement, we remain sceptical about whether red tape issues can be resolved and exports can pick up in the near term. In August, we saw the first grain cargoes transported and Ukrainian grain exports slowly resuming. If the deal is extended and not undermined, more shipments could go to Asia, demand could increase, and the same may happen with ton-miles, but to a lesser level than before the war.

❷ **Your company recently listed a bond on the Athens Stock Exchange to raise additional capital. What is the outlook for the Greek stock market and the Greek economy as a whole? How will the energy crisis and rising inflation affect the growth prospects of Greece?**

Given the comparatively small size of the Greek economy, we expect that it will be heavily affected by the Euro Area growth prospects, which have been recently revised downwards to 2.6% for 2022 and 1.2% for 2023 as per IMF's latest world economic outlook growth projection released on 26 July. In Europe, these significant downgrades reflect spill-overs from the war in Ukraine and the tighter monetary policy. On the other hand, due to the war-induced commodity price increases, the broadening pressures on food and energy prices, and lingering supply-demand imbalances, global inflation is anticipated to reach 6.6% in advanced economies and 9.5% in emerging market and developing economies this year, an upward revision of almost 1%.

However, the size of the Greek economy is such that increased direct foreign investments and tourism revenues could positively affect its growth trajectory. The EU Commission has recently revised its Greek economy forecasts downwards, increasing inflation projections to 6.3% for 2022, mainly due to the war in Ukraine and the subsequent turmoil in the energy market.

❸ **The shipping industry will be implementing new environmental regulations in 2023. Given the uncertainty caused by the lack of ready-to-use technologies and fuels and the new energy status quo, how can a company draw up a clear green investment strategy?**

Safe Bulkers has put environmental competitiveness at the centre of its investment strategy. Our fleet currently consists of 44 dry bulk vessels. We had placed a total order for 11 Tier III-compliant newbuilds, of which we have already taken delivery of the first two - MV Vassos in May and MV Climate Respect in July. Five more are expected in 2023, three in 2024, and the last one in the first quarter of 2025. Our fleet will count 53 ships after these deliveries, and our current fleet average of 10.3 years will remain stable for the next 2 years. Making an investment of this size in the latest technology available on Tier III-compliant newbuilds clearly reflects our determination to stay at the fore-

front of environmental protection and competitiveness, which will differentiate us in the next shipping cycle.
In addition, we have installed 18 scrubbers, mostly on our bigger-sized Cape and Post-Panamax vessels, which provides a significant measurable potential for increased earnings in this inflated fuel price environment.

❹ **Do you think the Ukrainian crisis will slow down the decarbonisation plans of some states?**

Yes, definitely. We believe there is a temporary halt in the decarbonisation front, despite the momentum it had gained in 2021. The war has transformed the energy landscape and rapidly shifted the discussion from energy transition to energy security. Many countries and economies are turning to coal or seaborne LNG as an alternative source to Russian energy. However, in the long-term, the climate crisis fight will have to be addressed again as a matter of top priority.

The war has transformed the energy landscape and rapidly shifted the discussion from energy transition to energy security. Many countries and economies are turning to coal or seaborne LNG as an alternative source to Russian energy.

❺ **In the first half of 2022, orders for dry bulk vessels decreased compared to the corresponding period in 2021. What do you think is the reason for this downward trend?**

We have a record low orderbook and expect minimal fleet growth for the years up to 2026 in all dry bulk vessel sizes. We believe that the main reason for that is the uncertainty surrounding alternative fuels and new vessel technologies, which will have to comply with current and future environmental regulations coming into force up to 2030. The supply fundamentals remain positive for dry bulk sector as shipyard capacity is occupied by other sectors' orders, mainly containerships and LNG carriers.

❻ **The Hellenic Ministry of Maritime Affairs & Insular Policy has set the increase in the number of vessels flying the Greek flag as a top priority. However, it is observed that while the Greek-owned fleet is growing, the Greek Ship Registry is not following the same upward trend. For what reasons is there no significant increase in Greek-flagged ships?**

Safe Bulkers believes that Greek-flagged ship numbers can only increase in tandem with the growth of the Greek-owned fleet, provided there is also a substantial increase in Greek seafarer availability.
A combined effort of all stakeholders is needed to achieve such a target. At the same time, we are happy to be flying the second-best alternative available to any Greek shipowner, namely the Cyprus flag, which we proudly fly on almost all our fleet's ships, defying the Turkish embargo, especially at a time when the neighbouring country is demonstrating hostile attitude, taking advantage of the geopolitical instability created by the Ukrainian war.

❼ **ESG has entered shipping dynamically, yet despite the great emphasis placed on the E and the G, progress regarding the S is not following the same pace. What HR strategies does your company follow to ensure diversity and inclusion?**

First, allow me to point out that we recently published our 2nd Annual ESG Report for 2021. In summary, this report focuses on corporate governance: our support to our seafarers during the COVID restrictions; our support to local communities through our scholarship program; the training we provided to our staff; our $371 million investment in 11 Tier III-compliant newbuilds ahead of our peers, and our verified AER and EEOI reports' data for 2021.
In addition to the above, in 2022, we have made environmentally friendly upgrades to our existing fleet worth $2.2 million. By the end of May, we had used about 2,000 tonnes of biofuels, which emitted 1,550 tonnes less CO_2.
To conclude, let me share with you the actions we have taken recently, including during the COVID-19 period, which we believe might be helpful as a guide for our company's continued diversity and progress in years to come.

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Safe Bulkers has endorsed the Neptune Declaration on Seafarer Wellbeing and Crew Changes to address the unprecedented crew change challenges instigated by the pandemic. The Neptune Declaration urges the implementation of four main actions to address the crisis:

- Recognising seafarers as key workers and giving them priority access to COVID-19 vaccinations;
- Implementing high-standard health protocols;
- Increasing collaboration between ship operators and charterers to facilitate crew changes;
- Ensuring airline connectivity between key maritime hubs for seafarers;

As Safe Bulkers' CEO, I have actively participated in international forums and panels, raising awareness about the crew change crisis and proposing realistic solutions, such as creating a safe corridor and providing vaccinations for crew personnel that the Republic of Cyprus has adopted.

Finally, here is some interesting data about our company's actions and performance during the pandemic that we are proud of:

- We performed twenty-four (24) deviations to Manila Bay (Philippines) and Vung-Tau (Vietnam) for crew changes at the company's expense (without company clients or personnel contributing to these expenses);
- We launched an on-demand, one-to-one remote medical consultation service, which provides our seafarers in need with diagnoses and medical advice;
- We established an internet and telephone allowance for our crews to facilitate their communication with their families;
- We established a private insurance scheme for our officers;
- We performed annual performance appraisal evaluations for all employees based on the goals, skills, and experiences set individually for each employee;
- From 2019 to 2020, our shore-based personnel's female-to-male increased by 6%; this ratio reached 30% in 2021;
- We had a 3-year reduction in the average age of our employees from 2020 to 2021;
- Our retention rate for senior and junior officers on board our vessels increased by 10% in 2021 vs 2020;
- We introduced a work-from-home program for our shore-based personnel;
- We launched an extensive in-house team-building coaching programme on a one-to-one basis with our in-house coach/psychologist;
- We promoted more than 20 officers to senior officer ranks in the past two years.
- 40% of the company's superintendents have sea-going experience;
- 95% of the company's employees have attended higher education;
- Our overall approach is aligned with the Seafarers' On Board - Best Practice Charter, as articulated by the Sustainable Shipping Initiative (SSI), whose philosophy is to go above and beyond the standard provisions of the Maritime Labour Convention (MLC). The company's steadily increasing adaptation of the 17-point Charter demonstrates our strategic commitment to supporting our workforce.

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The Founder & CEO of Load Line Marine SA, expresses his view on the prospects of the dry bulk sector and explains his company's growth strategy. Mr Souravlas also talks about the EU's green shipping policies, the sector's digitalisation, and the return of Greek banks to shipping finance.

THERE IS A TWO-TIER MARKET IN THE ATLANTIC

George Souravlas,
Founder & CEO
at Load Line Marine SA

in a discussion with
Giannis Theodoropoulos

❶ **How do you expect routes and cargoes in the dry bulk sector to change due to the Ukrainian crisis? Do you think smaller and medium-sized bulkers will benefit?**

Global grain consumption will remain unchanged as grains fulfil a basic human need. So far, ships have had to cover longer distances to compensate for the shortage of grain exports from Ukraine. A case in point is the grain from South America, Australia, or even India carried to cover North Africa's needs. In this case, medium-sized ships have benefited the most, as traders have found them more attractive due to the economies of scale achieved over long distances.

However, commercial corridors seem to be opening, and grain cargoes are shyly flowing out of Ukraine again. In this case, smaller and older bulkers will be preferred as they need lower extra war risk insurance.

That said, Ukrainian grain exports will decline as crops will be smaller compared to previous years.

❷ **Which geographic areas do you think will play a crucial role in the short-term future of dry bulk carriers?**

These days, there is a two-tier market in the Atlantic. On the one hand, South America is very active in grain exports, while on the other, grain cargoes originating from the Continent/Baltic/Black Sea areas are limited. Looking at the areas that may benefit from South America as a major grain supplier is crucial.

Another area where we expect to see increased activity is the US Gulf when the crops are ready for shipment, which is usually in Q4. We may also see some trade coming from India after the monsoon season is over and the export ban has been lifted.

Due to the Ukrainian crisis, the world economy will grow at a slower pace, and there will be a contraction in some areas. Dry bulk shipping rates are closely correlated to global economic growth. However, one must consider that for the time being, natural gas will be replaced by coal, a commodity carried mostly by larger bulkers, so this may counterbalance the negative effect of slower global economic growth.

❸ **Would you consider expanding your fleet by incorporating larger bulk carriers?**

Load Line Marine SA, with a fleet of 9 Handysize, 3 Supramax and an Ultramax bulk carrier, specialises in the Handy to Ultramax size sector. We have solid commercial relationships with several charterers and have managed to build a name and reputation in this field. The sectors mentioned above have exhibited stability over the years and, in recent years, excellent returns. However, this does not mean that expanding into larger sectors is out of the question. An expansion in this direction may be of interest in the future.

❹ **Load Line Marine S A strongly emphasises excellence in ship inspections. Given the increased demands of charterers and port authorities, how can a company continue to achieve this excellence?**

Our company emphasises and takes pride in the high level of maintenance of the fleet it manages. I am delighted to announce that two of our managed vessels have received USCG's most prestigious award, the E-Zero designation. Our fleet of 13 bulk carriers has received 22 Qualship21 awards over the years from the USCG.

However, ship inspections were more difficult during the pandemic as it was harder for our shore personnel to be physically present on vessels to inspect them, audit their systems, and meet the personnel onboard. Furthermore, as crew changes became more complicated and crew repatriation more difficult, morale and motivation on the ships were low, adversely affecting the quality of vessel maintenance. We sought various ways to boost morale on board, including free communications, photo contests, family benefits, supplying musical equipment, etc.
One must also consider that during the pandemic, our shore personnel could not attend special surveys and drydockings. Therefore, repair efficiency was not at the desired level. Also as the production of some spares parts was delayed there were occasions when critical components were unavailable.
Given the above, it goes without saying that it became harder to maintain a high level of ship maintenance. However, our company overcame the pandemic's difficulties and reached the highest standards possible.

The world is changing due to climatic change, the world's number one enemy. Everyone must do their part to save the environment, which also goes for shipping, even though it is the most efficient mode of transport and produces the least emissions compared to other means of transportation.

❺ Greek banks have increased their exposure to shipping finance. Do you think the lending terms for shipping companies have improved? What will be the impact of inflation and rising interest rates on shipping finance?

Greek banks have started making their presence felt again in shipping, which they have supported throughout the years, especially during the shipping crisis years, and Greek shipowners should be thankful for this support. Greek banks are now there to further support shipping by offering competitive lending rates and terms. A crucial factor, however, is the rising US Dollar interest rates (SOFR) that make ship finance more expensive, especially now that acquisition prices are higher.
We do business with Alpha Bank and are grateful for the high-quality service we receive and the support they have extended to us over the years.

❻ There has been much talk recently about the impact of the Emission Trading Scheme on European shipping, particularly on small and medium-sized companies. What is your opinion about Brussels' legislative initiatives? What will ultimately be the cost to European citizens?

The world is changing due to climatic change, the world's number one enemy. Everyone must do their part to save the environment, which also goes for shipping, even though it is the most efficient mode of transport and produces the least emissions compared to other means of transportation.
Rightly, Brussels is setting up a shipping taxation scheme to promote technological progress that will eventually reduce emissions. However, at the moment, such scheme would burden the European end consumer. Its timing may not be ideal given the current high energy costs and grains shortage.

❼ The shipping industry has enthusiastically embraced digitalisation. What are the opportunities and challenges brought by digitalisation? What is the role of the seafarer in this new reality?

Digital transformation is taking place everywhere, including shipping. Digital charts have replaced paper charts and are much safer. These days, seafarers can keep in touch with their families using mobile phones, usually at no cost.
Most of our vessels have or are in the process of installing monitoring systems that give full access to all information and control systems onboard. High-definition cameras on board send real-time images to the office. Weather routing systems enable crews to enhance their vessels' performance and avoid risks. The possibilities are endless.
However, if the question is whether we have reached the age of crewless ships, in my view, the answer is NO. Shipping will first undergo a technological transformation related to emissions, and once that is over, we can start looking at the crewless ship.

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ON THE

Edited by:
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IS EUROPE'S ENERGY CRISIS HERE TO STAY?

The Russian invasion has changed the balance in the world markets and shaken the integrity of Europe. Given the diminished gas flows from Russia, Europe could face supply shortages for many winters until it finds a solution, according to Shell CEO Ben van Beurden.

The main reasons for Europe's inability to make up for Russian natural gas supplies are its inadequate LNG infrastructure and terminals and its competition with Asian markets for LNG imports.

According to the Russian state-run news website TASS, Dmitry Medvedev, former prime minister and current vice-chairman of Russia's Security Council, referring to Europe's energy crisis, pointed out that gas prices in Europe could reach 5,000 euros per 1,000 cubic metres by the end of 2022.

THE EU SUSPENDS TRAVEL VISA AGREEMENT WITH RUSSIA: THE IMPACT ON CREW CHANGES

EU foreign ministers agreed on Wednesday, 31 August, to suspend the visa facilitation agreement with Russia, making access to the EU more difficult and costly for Russian citizens.

"The number of new visas issued by EU member states will be reduced. It will be more difficult and take longer," noted EU foreign policy chief Josep Borrell after the foreign ministers' meeting, referring to the decision.

According to diplomatic sources cited by Reuters, the foreign ministers could not agree immediately on a blanket ban of travel visas for Russian nationals.

Borrell also pointed out that there has been a significant increase in Russian border crossings into the EU since mid-July, a development he described as a "security risk for these neighbouring states". The Kremlin's response was immediate, with Dmitry Peskov calling the EU's decision "ridiculous," adding that Russia was considering ways to respond.

The political decision to suspend the visa agreement with Russia will have to be endorsed by the EU's competent legislative bodies, so it is not yet known when it will come into effect. Undoubtedly, the ban will severely impact Russian seafarers who wish to embark/disembark at EU ports and airports as well as companies as they will be unable to make the related crew changes. Thus, travelling abroad to embark on ships will become a challenge if one considers that many Ukrainian seafarers are already stranded on vessels in the Black Sea. It is reminded that Russian and Ukrainian seafarers comprise 15% of the global shipping workforce.

THE "DROUGHT" IN LARGE TANKER ORDERS IS OVER

The VLCC order "drought" appears to be ending as favourable conditions have been prevailing in the market recently.

According to data in a recent Xclusiv Shipbrokers report, no orders for VLCCs had been registered in the last eighteen

SEAFRONT

months. Recently, Mitsui O.S.K. Lines ordered two dual-fuel LNG VLCCs from Dalian COSCO KHI Ship Engineering, with a delivery horizon between 2025 and 2026. Until recently, the orderbook consisted of 39 VLCCs, of which nineteen are scheduled for delivery this year and the rest in 2023 and 2024.

The Xclusiv report analyses the factors that have kept shipowners away from ordering VLCCs. The shipbroking company says that uncertainty regarding environmental regulations may explain the reduced demand for VLCC newbuilds. At the same time, the significant increase in steel prices means that building costs for these ships also went up. Indicatively, a VLCC is currently priced at $118 million, representing a 28%, 36% and 15% increase compared to 2019, 2020 and 2021, respectively. The poor charter market for VLCCs over the past 19 months and unavailable shipyard slots have also affected orders. However, this trend seems to be changing. The freight market is on an upward trend, and steel prices are dropping relative to the very high levels of May 2021, giving wings to the order market. At the same time, Iran is seeking to increase oil production and exports, while Venezuela is re-emerging as a potential supplier to Europe. The above, combined with the official EU embargo on Russia at the beginning of December, creates optimism for a further rise in the freight market, with analysts estimating that the spot market for VLCCs will approach $100,000. On the con-

trary, the reduction of production by OPEC+ and the global economic recession may be the only "obstacles" for the excellent performance of the freight market.
Source: Xclusiv Shipbrokers

BILL GATES BACKS METHANOL AS A FUEL FOR GLOBAL SHIPPING

Like other industry sectors, the shipping industry is called upon to reduce its environmental footprint. Many initiatives have been taken in this direction. Although there is an ongoing debate about who will bear the costs for greening shipping, shipyards, ship design firms, energy companies, classification societies, and shipping companies are stepping up their efforts to build commercially viable zero-emissions vessels.
Several projects are underway that employ advanced technologies and alternative fuels in this context. Interest in methanol has been increasing, so it is no coincidence that Bill Gates, one of the wealthiest people in the world, has also invested in technology to support the switch. Danish startup Blue World Technologies recently raised $37 million from investors, including Breakthrough Energy Ventures, backed by Bill Gates, to help it scale up production of a new system that could power large ships using methanol.
Blue World has developed a high-temperature fuel cell that can take a mixture of gases directly from the reformer — including small amounts of carbon monoxide that would spoil a regular commercial cell. Blue World's process produces only water and carbon dioxide, which can then be compressed, stored, and recombined later with hydrogen to produce more methanol.
Towards the end of 2021, Blue World Technologies took over the production of all critical components for methanol fuel cells and is currently in the production stage. Blue World Technologies is expected to continue upscaling production to reach a full-scale commercial production capacity of 50,000 fuel cell units within three years

ELON MUSK ENTERS THE CRUISE MARKET

Royal Caribbean Cruises has announced a deal with SpaceX's Starlink to provide uninterrupted internet access onboard its ships.
The partnership aims to combat historically bad internet connectivity during cruise voyages. The technology will be deployed across all Royal Caribbean-owned cruise ships beginning immediately, with installation scheduled to be completed early next year.
"This technology will provide game-changing internet connectivity onboard our ships," Royal Caribbean CEO Jason Liberty said in a press release. "It will improve and enable more high-bandwidth activities like video streaming and activities like video calls."
Starlink is an interconnected internet network of thousands of satellites in low Earth orbit that SpaceX envisions will deliver high-speed internet anywhere on the planet. The company has launched about 2,700 satellites to date.

CHINA'S ECONOMIC MEASURES DRIVING THE BULK CARRIER MARKET

China's August iron ore imports fell 1.7% year on year. According to data from Oceanbolt, despite the reduction, imported volumes reached their highest levels since January 2022, following a

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3.1% increase from July on a year-on-year basis. In addition, China's iron ore imports, so far in 2022, fell by 3.3% year-on-year, accounting for 20% of the quantities carried by bulk carriers. Nevertheless, estimates point to a recovery in China's iron ore imports, which would benefit the Capesizes market.

According to Niels Rasmussen, Chief Shipping Analyst at BIMCO, China's recently announced economic measures focusing on infrastructure development are creating optimism for increased bulk carrier demand; however, the real estate crisis may continue to weigh on iron ore demand.

The Chinese real estate market is plagued, among other things, by high debt but also falling sales and prices. In addition, Beijing's zero-tolerance pandemic policy further hampers consumer spending and business demand. Any new and prolonged lockdowns will slow the real estate sector's recovery, negatively impacting iron ore demand.

Finally, Niels Rasmussen underlined that any recovery would be a godsend for the Capesizes market, as the relevant Baltic Exchange Capesize Index recently dropped by 85.5% due to oversupply caused by reduced port congestion.

THE POTENTIAL EFFECT OF AN IRANIAN NUCLEAR DEAL ON TANKERS

Talks to revive the Iran nuclear deal and potentially ease oil sanctions are making progress, which has thrown the spotlight onto a sizeable cache of crude held by Tehran that could be swiftly dispatched to buyers in the event an agreement is reached.

According to a Bloomberg report, citing data from ship-tracking firm Kpler, about 93 million barrels of Iranian oil and derivatives are stored on ships in the Persian Gulf, off Singapore, and near China. Therefore, if Iran legitimately returns to the oil markets, these cargoes can relatively quickly inundate the markets. Such a development will push oil prices down, possibly changing the supply and demand balance in the tanker market. After all, some tankers operate exclusively in oil and derivatives transportation from countries subject to sanctions. Once the sanctions against Iran are lifted, some will return to the international markets.

In the medium and long term, Iran will need to bring its output back to the previous high levels and fully consolidate its position in the global oil market. Thus, it will be able to fill the gap of Russia in the European markets, as Russian oil will soon be a thing of the past indefinitely.

If such a scenario materialises, the tonne-miles of Aframaxes and Suezmaxes could increase. These tankers have played a leading role in Iran's seaborne oil exports in the past and seem a natural choice for transporting cargo to European markets.

CONTAINERSHIPS: THE OMENS ON THE SUPPLY SIDE

A significant increase in the number of ships in the global containership fleet is predicted from 2023 onwards, as the very good charter market in 2021 pushed shipowners to bulk orders, while demand for newbuildings looks stable this year as well.

According to Clarksons, at the beginning of August, the containership orderbook stood at 7 million TEUs, while as a percentage of the existing fleet, it reached 28% compared to the corresponding 8% in the fourth quarter of 2020. Clarksons estimates that between 2023 and 2024, 5.2m TEUs will be delivered, bringing capacity growth to 8.1% next year and 7% in 2024.

Interestingly, 58% of the capacity ordered this year will be able to consume alternative fuels, marking a significant increase compared to 23% in 2021. At the beginning of August, the percentage of containerships on the orderbook that would be able to consume alternative fuels was around 32%.

It is noted that an increase in ship supply is not an entirely positive omen, as it leads to a decrease

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CAPABILITY

International Registries, Inc. and its affiliates (IRI) provide administrative and technical support to the Republic of the Marshall Islands (RMI) Maritime and Corporate Registries. Recognizing the specialized needs of the shipping andfinancial services industries across a broad commercial and economic spectrum, the RMI Registry (the "Registry") is one of the leading registries in the world surpassing 192.7 million gross tons at the end of August 2022. As of 30 June 2022, the RMI fleet had 1,445 vessels weighing 60,569,640 gross tons that were managed or owned by a Greek company. That is 27.8% of the total vessels and 31.4% of the total gross tonnage of the RMI fleet.

SUCCESS FACTORS

1) Employees with professional backgrounds in law, finance, ship management, seafaring, marine engineering, naval architecture, port State administrations, and Classification Societies, among others, are resourced based on their expertise, experience, and industry outreach.

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6) The RMI maintains a permanent representative and active delegation at the International Maritime Organization (IMO). This delegation plays a role in shaping future regulations, allowing the RMI to proactively manage the implementation of new requirements and provide relevant advice to owners/operators and other industry stakeholders.

7) Vessel types include, but are not limited to: tank ships; liquid natural gas (LNG)/gas carriers; bulk carriers; container ships; offshore drilling, production, and service units; passenger vessels; and yachts. The benefits of vessel registration under the RMI flag do not stop once the registration process is complete.

8) The RMI fleet is the youngest and greenest quality fleet in the world based on data published in Clarksons Research's World Fleet Register.

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in freight rates. However, in the case of containerships, whether port congestion continues or not will also play an essential role in this market's performance.

GLOOMY OUTLOOK FOR GRAIN SUPPLY

Scorching temperatures and arid conditions during the Northern hemisphere summer have been drying crops, and, at the same time, the food crisis due to the war in Ukraine is intensifying.

In the US, recently released estimates from Pro Farmer regarding corn and soybean crops are 4% lower than the official government forecasts. Production output is crucial, as it will determine grain prices for the upcoming months. According to the US Department of Agriculture, there will be a 5% decrease in corn production and a 2% increase in soybean production.

In China, the worst drought since the early 1960s in central and southwestern areas and floods in the northeast threaten the harvest of hundreds of million tons of grains. Rice harvests along the Yangtze River and the Sichuan basin, the regions where half of the country's rice is produced, have been severely impacted. According to Chinese commodities broker Yongan Futures Co., total corn output is also estimated to drop by 4.5mn tons due to floods. The above losses will increase demand for imports and push prices upwards. The country is now turning to the US for imports amid soaring Brazil soybean prices.

India's rice harvest picture is similar, with production expected to drop by 10% in the upcoming harvest season. Ukraine's grain is leaving its ports smoothly – on 30 August, the country's Ministry of Infrastructure announced that approximately 1.5mn tons of grains had been exported from the country's ports. However, this does not seem to be improving grain prices.

The European Commission projects this year's crop at 59.3 million tonnes, which, if realised, would be a 7-year low.

Source: Intermodal – Weekly Market Report (Week 34)

THE LARGEST WIND FARM IN THE WORLD BEGINS OPERATIONS

The Hornsea 2 wind farm, described as the largest in the world, is now fully operational. Situated roughly 55 miles off the coast of Yorkshire, England, Hornsea 2 can generate enough electricity to power about 1.3 million homes.

A decade ago, renewables could meet just 11% of the UK's energy needs. In 2021, this increased to 40%, mainly due to the increase in power generated from wind energy.

Hornsea 2 has taken the title of "world's largest wind farm" from its neighbour Hornsea 1. With even larger projects under construction in the North Sea, it is unlikely to keep this title for long.

Efforts to find alternative energy sources to replace Russian natural gas have intensified as the energy crisis besets the planet. Offshore wind projects take about five years from planning consent to full operation, so they are considered an attractive method of energy production.

2021 PSC INSPECTIONS IN AUSTRALIA IN NUMBERS

The Australian Maritime Safety Authority (AMSA) released its annual report on Port State Control inspections in 2021, which includes some interesting data.

In 2021, AMSA inspectors carried out 2,820 PSC inspections, a 6.65 per cent drop in the inspection rate from 2020 (3,021 PSC inspections). The PSC inspection results for 2021 saw a slight decrease in the detention rate of ships from 5.9 per cent in 2020 to 5.6 per cent (the peak in 2011 was 9.2 per cent). The most frequent reason for detentions was the incomplete implementation of the safety management system, as defined by ISM.

A total of 26,400 arrivals were recorded at Australian ports by 6,170 foreign-flagged ships in 2021. The average age of vessels calling at these ports was 11 years. Bulk carrier arrivals increased by 3.2% in 2021, to 14,814, while vehicle carrier arrivals increased by 19.6% and general cargo arrivals by 12%. Due to pandemic restrictions, cruise ship arrivals fell significantly (from 536 in 2020 to just 34) last year.

AMSA emphasised that the quality of ships sailing through Australian ports continues to be high as the average deficiency rate remained relatively constant, increasing slightly from 2.1 deficiencies per inspection in 2020 to 2.2 deficiencies per inspection in 2021.

Regarding the distribution of vessels by registry inspected by AMSA last year, 22.1% (624) were Panamanian-flagged, 15.2% (429) Marshall Islands-flagged, 13.4% (378) Liberia-flagged, 12.7% (358) flew the Hong Kong flag and 8.4% (238) the Singapore flag. Of the vessels inspected, 42 were Greek-flagged.

Finally, iron ore and coal were Australia's largest exports by value, followed by gas exports.

SHOCK DECISION BY TURKEY RATTLES THE WIDER REGION

The Turkish authorities made a sudden and unprecedented move affecting the smooth functioning of trade and, by extension, shipping.

Turkey's excessive 400% increase imposed on ships crossing the Bosphorus as of 7 October

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2022 creates huge management problems for ships under charter or agreed to be chartered, especially shortsea shipping ships carrying out frequent crossings.

The Hellenic Shortsea Shipowners Association (HSSA), with its relevant letter to the Ministries of Foreign Affairs and Maritime & Island Policy, requests the immediate intervention of the Greek Government.

At the same time, the HSSA is in communication with international organisations, as this unjustified decision by the Turkish authorities affects the free movement of goods and is against global maritime community practices.

A NEW ERA BEGINS FOR THE ELEFSINA SHIPYARDS

The Elefsina Shipyards have become a critical pillar of the national defence industry with guaranteed jobs, as the Greek Prime Minister Kyriakos Mitsotakis stated during his visit to the shipyard on Friday, 2 September, after parliament had passed the bill providing for the company's sanitisation.

"Today is indeed a very important, a great moment for the Elefsina Shipyards, and I want to start by thanking everyone who worked so that this very critical law could be passed", noted Kyriakos Mitsotakis, speaking to the shipyard workers, who characteristically replied, "You have saved 600 families".

"We are here today, the state, investor, and employees, to celebrate a great day for Elefsina Shipyards. We have managed to secure all the jobs, pay all back wages, and bring close to 200 million euros in investment to the shipyard repeating here what I had the opportunity to see being done in Syros. Whereas the shipyard looked like a bombarded landscape four years ago, if you visit it today, it is a living Shipyard, with ships waiting to be repaired, satisfied workers and above all, satisfied customers. Because some people send their ships to Syros for repairs; it is inconceivable; it has always been inconceivable to me how can the country with the largest commercial fleet in the world not be able to repair its ships in Greece. This has changed in Syros and will also change here in Elefsina," the prime minister underlined.

On the occasion of the passing of the bill, the Managing Director of the Elefsina Port Authority, Mr Apostolos Kamarinakis, stated:

"We welcome the passing of the bill by parliament as it resolves the issue of the Elefsina Shipyards and puts an end to a chronic problem that impacts the national and local economy, the region's community, the workers, and their families.

"We expect the immediate reopening of the Elefsina Shipyards, as it is an important industry located in Elefsina Port Authority SA's jurisdiction, and its reopening is considered of the utmost importance for the future development of the country's shipbuilding industry," he added.

ELSTAT'S JULY DATA ON THE GREEK MERCHANT FLEET

According to ELSTAT, the number of ships and the carrying capacity of the Greek merchant fleet are declining.

In July 2022, the gross tonnage of the Greek Merchant fleet for vessels of 100 GRT and above dropped by 2.2%, and ship numbers declined by 0.2% compared to June 2021. Based on June data, the Greek merchant fleet comprises 1,834 ships with 38,963,825 cubic metres GRT.

41% (744) of these are passenger ships, 21% (376) cargo ships and 24% (445) tankers. Year on year, the Greek merchant fleet's passenger ships increased by 3.6%, while bulk carriers and tankers decreased by 4.8% and 3.9%, respectively.

In terms of gross tonnage, tankers play the most important role in the Greek ocean-going fleet, accounting for 68% of the Greek Merchant fleet's total capacity.

65.3% of the said ships (1,198) have a capacity of up to 3,000 GT, representing 1.6% of the fleet's total capacity. 11.6% of the vessels (213) have a capacity between 3,000 and 7,000 GT, accounting for 7.6% of the fleet's total capacity. 24.1% of the ships (423) have a carrying capacity of 30,000 GT, cumulatively representing 91% of the fleet's total capacity.

DROP IN PIRAEUS CONTAINER THROUGHPUT IN THE FIRST HALF OF THE YEAR

On Tuesday, 30 August, Cosco Shipping Ports announced its financial results for the first half of 2022.

According to the announcement, the Chinese giant's revenue increased by 24.7% to $704.6 million, while gross profits increased by 33.3% to $197.7 million. At the same time, the total handling of containers from terminals managed by Cosco Shipping Ports increased in the first half by 0.8%, to 63,210,330 TEUs.

However, in Piraeus, container throughput decreased by 9.6%, to 2,144,064 TEUs, compared to 2,370,862 TEUs in the first half of 2021. Cosco attributed this drop to the port congestion recorded for several months.

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by **Elpi Petraki**,
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and Operations, Chartering &
Business Development Manager
at ENEA Management

SECURING THE INDUSTRY'S FUTURE REQUIRES MORE THAN NEW TECHNOLOGY AND REDUCED EMISSIONS

As technology advances and the shipping industry looks at how it can decarbonise effectively, we hear a lot about "future-proof" solutions. However, to truly future-proof the industry, we need to understand the needs of today's seafarers and shore-based staff so we can effectively invest in the next generation - the industry's future leaders.

The shipping industry is one of the oldest industries in the world, and its vast range of shore-based and at-sea job roles offer a huge variety of career opportunities. However, the global labour shortage in shipping means there is intense competition from other industries for new talent.

To attract that talent, we first need to understand what motivates the next generation. Deloitte's 2022 Gen Z and Millennial Survey provides some interesting insights. In these

uncertain times, the survey puts the cost of living and climate change at the top of current concerns.

When selecting an employer, work/life balance and learning/development opportunities are the top criteria, closely followed by salary and benefits. However, when it comes to employee retention, diversity, inclusion, and an organisation's social and environmental impact were also shown to be key factors. Many respondents said they would turn down a job if it didn't align with their personal values.

Developing Future Leaders

Therefore, to attract the next generation of leaders, shipping would be well advised to redouble efforts to collaborate with educational institutions so that maritime training and career development paths reflect today's priorities.

The work WISTA does to support women in shipping is relevant here as it facilitates continuous professional development and encourages training courses that help equip women and others with the skills needed to advance their careers.

WISTA Hellas, for example, works closely with prominent educational institutions and offers full and part-time scholarships available to any woman working in the maritime industry. Courses of note include the ALBA Graduate Business School's MBA in Shipping, an MSc in Logistics and Supply Chain Management from BCA College, and the University of Piraeus' MSC in Ship Management. We have also partnered with the ALBA Graduate Business School to provide a Leadership Programme specifically tailored for women in the maritime industry.

At an international level, WISTA International and the Institute of Chartered Shipbrokers (ICS) offer five scholarships each year for the Institute's Foundation Diploma. Last year, WISTA International also launched the Maritime ShEO Leadership Accelerator Programme in partnership with the IMO. The Accelerator Programme provides women with the management knowledge and skills they need to advance into leadership positions while also creating visible role models within the industry.

Others are also responding: the Maritime Port Authority of Singapore recently appointed 18 students as the first MaritimeSG Youth Ambassadors, and the City of Rotterdam has established a Young Maritime Board to participate in the Rotterdam Maritime Capital of Europe programme.

To truly future-proof the industry, we need to understand the needs of today's seafarers and shorebased staff so we can effectively invest in the next generation – the industry's future leaders.

Addressing Recruitment Challenges

In the more immediate term, we need to look no further than shipping's recent experience to understand other underlying issues.

The 2021 BIMCO/ICS Seafarer Workforce Report has predicted that by 2026, there would be a need for almost 90,000 additional STCW-certified officers as demand for seafarers to operate the world's merchant fleet continues to outstrip supply. The situation has undoubtedly been exacerbated by Covid-19, which exposed or highlighted unappealing aspects of the career at sea.

For example, work/life balance, crew connectivity, onboard security, and differing legal systems worldwide are only some of the challenges faced by seafarers that can negatively impact job satisfaction or crew retention.

As an industry, we need to find solutions to provide seafarers with greater support, such as

- rearranging work patterns to increase shore leave;
- investing in policies and processes that promote greater diversity and inclusion by creating the right environment onboard for everyone;
- ensuring existing crew receive training and can upskill as new technologies are introduced, and
- providing a safe and secure working environment for all.

Digitalisation and New Technologies

Finally, introducing new technologies should also create new roles that are more in tune with the skill sets of the younger generation, making the industry a more attractive option, particularly when digital solutions are being used to address issues such as decarbonisation.

The demand for digital skills in the global workforce will only continue to grow; we can already see this being translated into school curricula, where there is a greater focus on science, technology, engineering and math (STEM) subjects and the introduction of computer coding at primary school levels.

Digitalisation also provides a level playing field; my prediction is that going forward, more women will be recruited into maritime technology roles in which both men and women are equally qualified to embark on such a career.

We have an ambitious and tech-savvy cohort of young professionals who desire to make a difference within their reach. But as an industry, we must act; we have a collective responsibility to raise awareness about the array of opportunities on offer within shipping and to actively engage with the next generation to secure a sustainable future for our industry.

The Bulletin of the Atomic Scientists was founded in 1945 by Albert Einstein and University of Chicago scientists who helped develop the first atomic weapons in the Manhattan Project. They introduced the concept of the Doomsday Clock to convey threats to humanity and the planet. With the detonation of the first hydrogen bomb in 1952, the clock struck two minutes to midnight; the end of the Cold War in 1991 reset the clock to 17 minutes to midnight; the accelerating climate change and increasing nuclear threat in 2019 brought the clock to 2 minutes to midnight. With the Ukraine war in 2022, the clock struck 100 seconds to midnight. As Dr Ludwig Eduard Boltzmann (1844-1906) had said, "Available energy is the main object at stake in the struggle for existence and the evolution of the world". Unfortunately, his words have come true.

MEETING THE IMO STANDARDS & MOVING TOWARDS A ZERO-EMISSIONS INDUSTRY: TIME TO GET AWAKE

by **Stavros Hatzigrigoris**,
Chairman, MARTECMA &
Advanced Engineering Services

Even now that the world is facing a war in Europe, we should not ignore the impact of climate change on our planet. Shipping must achieve a Green House Gases (GHG) reduction of 50 % by 2050, a very difficult target.

As per data published by the UN, the world population will increase by 22.5 % to 9.7 billion people by 2050 - 12.2 % of this increase will be in Asia, 77.7 % in Africa, 14.7 % in Central and South America, 14 % in North America and 31.3 % in Oceania. The population of Europe will shrink by 5.1%.

In the same period, the growth of seaborne trade will be 8.3 % for bulk cargoes, 73.4 % for containerised goods, 327 % for gas and 28.7 % for other cargoes. Tanker transportation will shrink by 21.8 %.

The shipping industry is considering several alternative fuels as potential long-term solutions. - each with its advantages and challenges. Liquefied Natural Gas (LNG) is one of the leading options, as multiple marine engines and handling technologies are already available for LNG. However, although it is the cleanest-burning fossil fuel, LNG alone cannot meet the 2030 and 2050 GHG targets and must be combined with other technologies. Methane slip is an additional challenge. Marine engine technology is also available for the Liquefied Petroleum Gas (LPG) option. However, LPG bunkering infrastructure is still limited, and its GHG reduction is lower than that of LNG.

Methanol can be produced from both natural gas and renewable sources, but its production is energy intensive. Additional challenges include its corrosive nature and limited experience operating methanol-fueled marine engines. Nevertheless, there have been several orders for methanol-powered ships lately.

The development of an ammonia-fueled marine engine is underway, which is expected to be available by 2024. Ammonia as a marine fuel is carbon-free, but it produces significant NOx emissions requiring the introduction of SCR technologies to manage them. Although its production can also be carbon-free, it is not economically feasible for shipping. Ammonia slip and NOx issues should be investigated further. As ammonia is highly toxic, its use as a fuel should be addressed at the IMO level.

(*) The above article includes remarks and conclusions drawn by the presentation made by Mr Stavros Hatzigrigoris during the technical seminar of the Hellenic Institute of Marine Technology at Posidonia on Thursday, June 9, 2022.

Biofuels, which are carbon-neutral, also come with multiple challenges, such as their corrosive nature, limited storage duration, and the conflict of their production with the food industry.

Hydrogen is the cleanest marine fuel available. Its production can also have zero emissions, but it is very energy intensive, expensive, and not scalable, and its storage and handling are also challenging. These challenges could be addressed through an integrated reform of hydrogen production using LNG.

Nuclear power provides a very high fuel-to-power ratio, has zero GHG emissions, and requires no onboard space for bunkering. However, its economic viability should be further examined. In addition, the disposal of uranium at the end of its lifetime is a challenging issue, along with other social and political problems. With the development of molten salt reactors, several of the current issues with water-cooled reactors will be resolved.

Fuel cell technology has been successfully deployed in submarines. The main reasons that hold back its spreading are its high capital cost, weight, limited bunkering infrastructure, and safety issues.

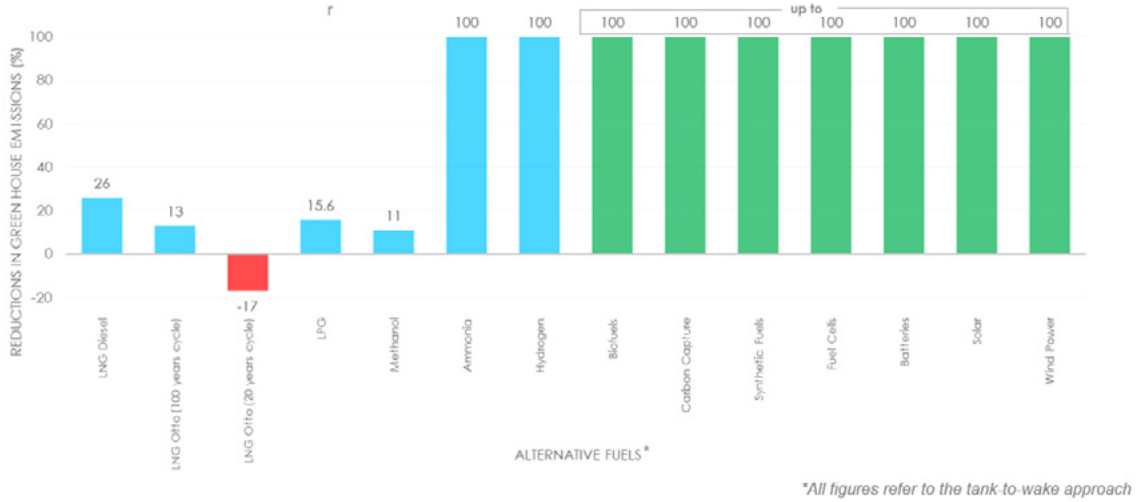
Other renewable energy technologies, such as solar or wind power, are also available, but so far, with limited applications. The challenges identified are dependence on weather conditions, storage space, and weight requirements. The following table shows the development status of several types of fuel.

The table below shows the current availability status of storage facilities, propulsion systems, onboard safety management systems, and the zero-carbon potential of each fuel/technology.

Fuel / Technology	Fuel production	Fuel storage logistics bunkering	Installation	Propulsion system	Onboard safety & fuel management	Zero carbon emission target
Fossil Fuels						
LNG						
LPG						
Methanol						
Ammonia						
Hydrogen						
Biofuels						
Nuclear						
Fuel Cells						

Existing technology Partly available / in progress A long way to go

The diagram below shows the percentage of GHG emissions reduction by each alternative fuel.

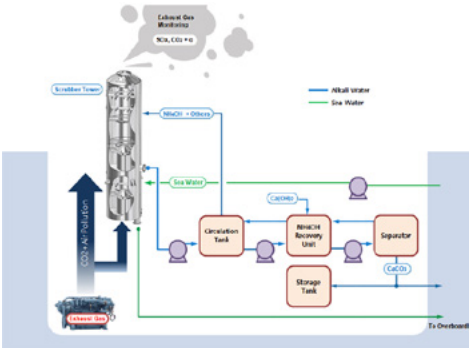


*All figures refer to the tank-to-wake approach

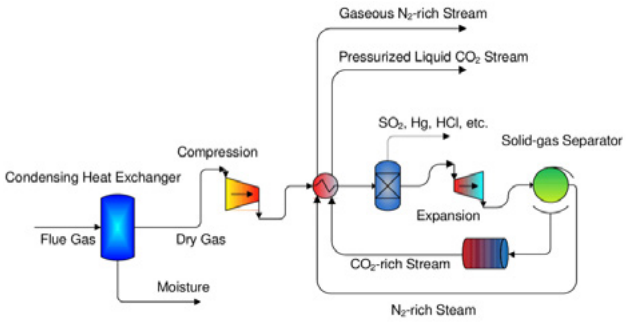
Carbon capture is an alternative technology that eliminates the need for alternative fuels, allowing the use of traditional carbon-based fuels. The challenge of carbon capture in the marine environment is handling and storing captured CO_2, which would require significant space, power, and specialised equipment. Some Carbon Capture solutions for ships are CO_2 absorption using ammonium hydroxide, CO_2 absorption by liquid amines, and CO_2 capture using cryogenic technology. The storing and disposing of liquid CO_2 will be a challenge. There is an ongoing debate about whether ships should be allowed to dump Calcium Carbonates ($CaCO_3$) straight into the sea.

New ship designs have greatly improved with the introduction of the Energy Efficient Design Index, which has been implemented since 2016. The minimum improvement for EEDI Phase III is 30%, but this may not be enough to meet the 2030 targets.

Existing ships will have to reduce their propulsion power in one go by 1 January 2023 by implementing EEXI requirements. They are also required to continuously improve their CII ratings up to 2026, when the new CII is introduced.



CCS using NH4OH



CCS using cryogenic technology

The table below shows the commercial fleet's compliance statistics with EEXI/CII requirements as compiled by ABS.

EEXI

Percent of vessels requiring improvement to become EEXI compliant

Bulk Carriers	87%	Sample 11,179 vessels
Containerships	88%	Sample 5,080 vessels
Tankers	85%	Sample 9,546 vessels
Gas Carriers	95%	Sample 1,705 vessels

CII

Percent of vessels requiring an operational change or improvement by 2030 to stay within A, B or C for CII

Bulk Carriers	82%	Sample 1,377 Vessels
Containerships	78%	Sample 731 Vessels
Tankers	70%	Sample of 1,110 Vessels
Gas Carriers	80%	Sample 128 Vessels
LNG Carriers	54%	Sample 98 Vessels

Technology will change but we will still need ships with enhanced reliability and maintainability. These are the ships that we will need to build in the next decades

Undoubtedly, a lot of work needs to be done to ensure the environmental sustainability of the shipping industry.

In conclusion, new fuels and technologies will have to be adequately studied and tested before their large-scale use onboard ships. Research and development in green technologies should be supported by green state funding.

It may be time to "break the tradition" and work with governments, oil majors, charterers, and shipbuilders towards a sustainable shipping industry. Independent shipowners will need support to keep ordering and operating their ships. On the other hand, ship-management companies should modernise their operational practices by adopting a "big-data" digitalisation approach in decision-making.

Ship technology will constantly change, so we should focus on the reliable, sustainable ships we will need to build in the following decades. Shore-controlled or autonomous ships can come later.

Well-to-wake theories need to be discussed. We should all get our house in order. At the moment, we feel that shipping is losing this game.

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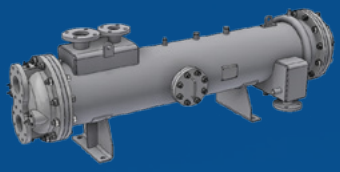

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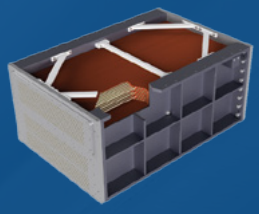

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A LOOK AT THE FUTURE OF THE SHIPYARD INDUSTRY

Decarbonising shipping requires the cooperation of all stakeholders involved. In this context, shipyards are called upon to play an important role, but the challenges they face are significant and multidimensional. Digitalisation, human resources shortages and pandemic restrictions are changing the industry's landscape.

In this feature, representatives of the shipping and shipyard industries discuss the current and future challenges and trends in the shipbuilding and ship repair sectors.

DEMAND FOR NEWBUILDING PROJECTS AND REPAIRS FLUCTUATES

by **Panos Kourkountis**,
Technical Director, Sea Traders SA

What are a shipping company's main criteria when selecting a shipyard for repairs or newbuildings?

The decisive factor in choosing the area where a ship will be repaired is the trading route. The parameters considered during the final selection of a repair yard are the yard's capabilities, references from previous repairs, cost, payment terms, and repair period. For newbuildings, the criteria are different. In terms of ship value and quality, the country where the shipyard is located is critical. Developing a newbuilding design is a time-consuming and costly process. Each shipyard focuses on building specific types and sizes of ships according to its experience, know-how, and capabilities. When choosing a shipyard to construct a new building, the main factors are ship specifications, cost, financing, and delivery time.

How often do you consider repositioning ships because of their special repair requirements or the fact that there are no reliable repair facilities/options in the area they trade?

Drydockings are planned well in advance in coordination with the chartering department to avoid the cost of deviation from the last port of discharge and minimise the off-hire time. The last voyage of the ship is not booked based only on the best commercial offer but also by considering the best position and conditions for the vessel to call at a repair yard.

In your opinion, can today's shipyard capacity cope with the demand from shipping companies?

Demand for newbuildings and repairs fluctuates. There are periods when the yards are fully booked and oth-

ers when there is no demand. The repair yards are mainly located in Asia, the Persian Gulf, and Europe. There are large geographical areas, especially in the southern hemisphere, where there are no shipyards. In these areas, ships cannot get technical support, so they face serious issues if unscheduled or emergency repairs are required.

Has the shipyard selection strategy changed due to the pandemic and the restrictive measures that followed?

The Covid-19 restrictions necessitated a re-evaluation of the drydocking preparation procedure. Local regulations and quarantine periods were essential factors in yard evaluation. Some companies hired local superintendents to attend drydockings or relocated the vessels and chose yards in areas where COVID regulations were not as strict. The yard's restrictions were considered in planning the last voyage before the drydocking. In our case, at least one of our superintendents stayed in China for a long time, and we managed to supervise all drydockings.

Drydockings are planned well in advance in coordination with the chartering department to avoid the cost of deviation from the last port of discharge and minimise the off-hire time.

Do you contact a shipyard directly to book a repair or use an agent instead?

In some cases, we approach a ship repair yard directly. However, we usually book the yard through an agent. Reputable and well-established agents have good knowledge of the market and are advisors to the owner. The agent's relationship with the yard is crucial. Some agents have personal contact with the yard's top management and can influence their decisions. Potentially, they could improve a yard's rates and gain priority and flexibility. In these cases, agent involvement is very beneficial to a project.

CONSOLIDATION WITHIN THE SHIPBUILDING INDUSTRY IS AN ONGOING PROCESS

by **Georgios Z. Sahat**,
Technical Manager, Velos Tankers Ltd.

What are a shipping company's main criteria when selecting a shipyard for repairs or newbuildings?

The selection of the most appropriate shipyard by any shipowner is always a complex and multidimensional process related to a variety of determining factors, and even more so today that vessel designs are becoming more sophisticated and vessel repair and retrofit technologies more and more demanding to ensure that vessels will achieve optimal efficiency in terms of environmental impact and operational integrity. Each process, whether in vessel construction or repair, requires excellent resources and project planning from all stakeholders to ensure efficiency, a reliable timeframe, and superior quality.

A vessel's trading area is one of the determining factors in selecting the shipyard's location, especially in low charter market conditions, when relocating vessels at the owner's expense would not be cost efficient. Another critical factor is the reliability of the services provided by a shipyard in terms of quality, safety standards, workforce expertise, installation facilities, diversity of modifications offered, quality of hull treatment or various repairs by approved service stations, response to unforeseen factors, access allowed to owner's ship superintendents, and collaboration among involved parties.

A further critical factor is the yard's reliability in terms of time. Bearing in mind that vessels are obliged to comply fully with strict commercial restrictions, any unforeseen delay on the part of the shipyard may have severe financial implications, including loss of revenues for the shipowner and the frustration of the charterer due to any delay incurred. Reliability regarding time means having the proper human resources and fewer interruptions from similar works carried out at different shipyard facilities. Evidently, an additional crucial factor is the shipyard's

pricing policy. However, this should be assessed along with all the other parameters mentioned above.

Given the complexity of the overall process, shipowners should ensure that they diligently evaluate all available alternatives, quantify all options and assess the risks involved. Finally, another standard practice is to audit a shipyard before entering into any shipbuilding or repair contract to verify all aspects of the service provided.

In your experience, do you think the existing capacity of shipyards can cope with the demand from shipping companies?

Between 2014 and 2021, the number of active global shipyards was nearly halved. According to certain studies, more than 230 yards were shut down, proving that consolidation within the shipbuilding industry is an ongoing process. Economic instability and major disruptions, such as the pandemic, geopolitical tensions, closures, and mergers, do not support the viability of shipyards. On top of these factors, we have been facing uncertainty surrounding the future fuel mix, propulsion systems, and forthcoming environmental regulations, destabilising the sector further. On the other hand, shipping is responsible for approximately 85% of global trade, which, coupled with global population growth, means the need for newbuildings and maintaining, repairing, and retrofitting the 50,000 merchant ships trading worldwide will continue to exist.

In plain words, when you do the maths, you can easily see that the shipyards' capacity cannot meet demand. We are confident the situation will stabilise once the pandemic restrictions are fully lifted and future vessel designs are more settled. Shipyards offering reliable, superior quality services will thrive. Given the increasing specification and sophisticated requirements, shipyards will also need to modernise their facilities and invest in technologies that will allow them to scale up their production without jeopardising the quality of services offered to effectively manage the growing expectations and demand in the coming years.

How often do you consider repositioning ships because of their special repair requirements or the fact that there are no reliable repair facilities/options in the area they trade?

Repositioning a vessel due to its repair requirements is an option chosen often. The prevailing economic market and freight conditions, i.e., the vessel's operational off-hire limitations and eliminating ballasting costs, are critical considerations in exercising this option. It also depends on the urgency of the particular modification/repair requirements. Slot availability is also crucial; if reliable local facilities in the region where the vessel is currently positioned cannot offer a vessel repair slot, the vessel will need to be repositioned. The decision on whether to reposition a vessel must be a thoroughly weighed, collective decision, taken jointly by technical managers who will assess alternative shipyard options and commercial teams, which have a valuable understanding of the market and chartering conditions.

Has the strategy of choosing a shipyard changed due to the pandemic and the restrictive measures that followed?

The pandemic disruption was a harsh blow for shipyards worldwide, leading to a global decline in demand for sea transport. The European shipyards were hit even harder. Q1 2020 figures were similar to those of 2019. However, a 26.5% decrease in overall ship calls was noted in the second quarter, shortly after the World Health Organisation declared the coronavirus outbreak a pandemic. Imports, exports, and intra-EU maritime trade all declined dramatically in 2020. The pandemic has entirely changed our way of life, our consumption patterns and, as such, vessel supply flows and global trading patterns. In addition, Covid-19 safety protocols severely affected shipyard availability and the complexity and duration of carrying out vessel repairs, while long quarantine periods affected vessel repair periods, crew changes, the easy access of owner representatives, delivery of spare parts, supplies etc. These repercussions made vessel repair a complex equation with rapidly changing conditions and challenges. Are those significant reasons for choosing a reliable shipyard? They definitely are!

The selection of the most appropriate shipyard by any shipowner is always a complex and multidimensional process related to a variety of determining factors.

Do you contact a shipyard directly to book a repair or use an agent instead?

It depends. Each company has its own policy and practices. I would opt for a combination of both. We have established long-term collaborations with specific shipyards and therefore have an open line of communication, which is based on understanding and trust. In other cases, we may use an agent to negotiate better terms and conditions with regional yards. However, the principal objective in both cases is for shipowners to provide a reliable, clear list of their requirements and expectations and for shipyards to fulfil the work specified in the repair agreement.

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THE SECTOR HAS TO COPE WITH THE TWIN CHALLENGES OF THE GREEN/ DIGITAL TRANSITION

by **René Berkvens**,
SEA Europe's Chair and
Vice President of Damen Holding

How do you approach the human factor issue? Do you have any initiatives underway to attract, train and retain employees at your facility? Are you concerned about the labour shortages in many shipyards around the world?

The shipbuilding and marine equipment industry, known as the maritime technology sector, has created more than 1 million jobs in Europe's maritime regions. About 35% of the industry's workers have a higher education or technical background, while 60% have vocational education and training (VET) or other specialised education.

So, the answer is yes, the marine technology industry is concerned about its labour and looming labour shortages. Firstly, the sector has to cope with the twin challenges of the green/ digital transition, for which it must be able to rely on a trained and skilled workforce. Secondly, the sector's current workforce is ageing - about 40% are expected to retire in the next decade. Hence, it needs to find new - preferably young - people with the training and skills to deal with new megatrends, and this at a time when there is fierce competition with other industries for such people, and the completion is global.

Due to the complexity and extent of the green/digital agenda, individual companies cannot tackle it alone, despite having prepared intensive upskilling and reskilling plans. That is why the sector is collectively involved in various EU initiatives through SEA Europe, such as:

- The European Skills Council: This project has produced a report identifying the sector's skills needs and employment trends while making forecasts about future needs. It also includes an analysis of the qualitative evolution of sectoral skills while identifying innovative tools, national and regional strategies, local initiatives, and methods in place in countries represented in the Skills Council.
- The Upskilling Shipbuilding Workforce in Europe (USWE)

Project: This project has built on the work of previous projects with a specific focus on the sector's skills gaps related to decarbonisation and digitalisation. The final report from this EU-funded project contains findings and recommendations, such as creating a Skills Analytics Framework and an observatory for better coordination between key regional stakeholders regarding the development of regional skills management systems. The project also paved the way for the sector's EU Pact for Skills.

- A sectoral Pact for Skills: Shipbuilding and its supply chain have been identified as an industry with the responsibility and potential to drive the twin green/digital transitions, support Europe's industrial competitiveness, and improve connectivity. However, while employment prospects in the sector look promising, it still needs to overcome the adverse effects of the pandemic crisis while coping with the twin green/digital transition challenge. To that end, the industry-led sectoral Pact for Skills has brought together all relevant stakeholders and education providers to support their efforts and massive investments in upskilling or reskilling the workforce and attracting new, highly skilled workers.
- It is paramount for a strategic industry like the maritime technology sector to employ and rely on a highly skilled workforce that can produce innovative, high-tech and greener products, in line with the EU's green and digital policy ambitions.

How are environmental regulations impacting your business?

International, EU, and national environmental regulations profoundly affect an industry such as the marine technology sector. Political ambitions such as the European Green Deal can potentially change or disrupt inland navigation or sea transport. Ships operating for decades on fossil fuels, particularly heavy fuel oil, will need to cut their emissions by at least 55% by 2030. Achieving this target will require a massive building of new ships or a dedicated retrofitting programme. It goes without saying that such ambitions and the corresponding regulations will require tremendous effort from shipyards and maritime equipment manufacturers,

notably in their production processes. Nevertheless, these ambitions also offer promising business opportunities in that shipyards will be asked to build zero-emission vessels or retrofit existing ones to make them climate-friendly. For this reason, SEA Europe is fully behind the European Green Deal and believes it could even help Europe regain some of its lost markets.

But to turn the European Green Deal and other related political ambitions or environmental regulations into real business success, SEA Europe has been calling on policymakers to put in place a proper framework to restore the level playing field in global shipbuilding. This framework should include trade measures to support the competitiveness of European shipyards, financially support the significant investments needed by the entire waterborne sector in research, development and innovation, and transform shipping and inland navigation into a zero-emission transport mode. It should also incentivise the development of green technologies and sustainable alternative fuels and their onboard integration and support the deployment of green infrastructure or provide incentives for first movers.

What are the most significant challenges regarding a shipyard's infrastructure? Does the increasing size of vessels make you consider developing new infrastructure to accommodate bigger vessels?

That is an interesting question, as most of the world's larger ships are cargo vessels built in China or South Korea, not Europe. As regards big cruise vessels, European shipyards can still accommodate them with their existing infrastructure; however, given the labour shortages and the need for efficiency improvements, the industry must invest in automation and robotisation.

What risk assessment techniques do you apply to ensure the smooth execution of ship repair work?

When considering a ship repair project, shipyards perform a risk assessment to ensure the safety of the workers and the ship by following specific guidelines. A concrete example is the recent "Guide on NG gas as a marine fuel: Work practices for maintenance, repair and dry-dock operations".

Various guidelines were published following the identification of potential safety risks regarding repair work on LNG-powered ships soon after these ships came into operation. This new guide was elaborated by the Society for Marine Gas as a Fuel (SGMF), with the help of SEA Europe's dedicated working group on Ship Maintenance, Repair and Conversion and the close cooperation of other stakeholders to provide updated information that will ensure the safety of all relevant parties while executing maintenance or repair tasks on LNG-powered ships.

How does increasing inflation affect a shipyard's negotiations with shipowners and suppliers?

Shipowners and the maritime manufacturing industry will have to get used to inflation quickly. When the world was hit by more than 10% inflation in the 1980s, helpful measures such as price adjustment clauses for raw materials and wage increases were implemented, so we should do likewise to battle today's inflation. That said, it is expected that the current inflationary spiral will be short-lived as it is a consequence of the Covid pandemic. Let's hope so!

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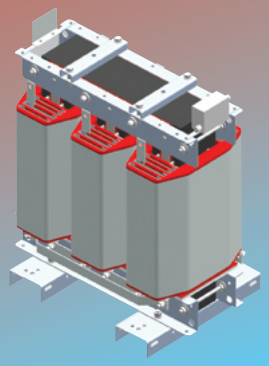

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MITIGATING RISKS IN THE SHIPYARD INDUSTRY

by **Alexandros Nomikos**,
Managing Director
of Al Blagha Industrial

How do you approach the human factor issue? Do you have any initiatives underway to attract, train and retain employees at your facility? Are you concerned about the labour shortages in many shipyards around the world?

Here at Al Blagha Industrial Co. (ABIC), our number one asset is and will remain our people.

As we diversify the type and nature of projects the shipyard can undertake, we simultaneously need to broaden our skill set. For this reason, we seek to recruit the best talent available at every organisational level. Our employees' expertise and skill set are a vital part of our business's success. However, this is not the only part of the equation - we also endeavour to employ people with the right attitude and mindset, which we consider of equal importance. This is easier said than done, particularly in hands on positions where attributes such as proactiveness and teamwork are more difficult to distinguish at the time of recruitment. We therefore emphasize on key organisational positions in junior management and above, where proven experience and the right mindset are weighed with the aim of seeding, inspiring, and developing the skill set and positive behaviour. Although this process may require more effort, we consider that the benefits of having this strategy outweigh its drawbacks in the long run.

Having a targeted recruitment program alone however is not enough. After recruiting the right personnel with the right skill and mindset, we need to consider how we can maintain, motivate, and further develop our employees. In this regard, we have developed a multi-angular approach towards evaluation, recognition, and motivation. We see our employees as an integral part of the organisation and our partners toward a common success path, and hence we have taken a deep dive, in fully upgrading our evaluation program. It now offers a more comprehensive and objective angle while also identifying the specific areas of improvement or development, which we elaborate in dedicated meetings with each employee. We strongly believe in this transparency and collaboration between an employee and his line management and consider it mutually beneficial.

In addition, we have developed a motivational system which takes many forms and sizes and is part of our Just Culture and Safety Incentive Procedure. This process rewards and motivates employees who deliver outstanding safety or operational performance.

How are environmental regulations impacting your business?

From an environmental perspective, a shipyard is a high-risk facility, and we at ABIC operate according to ISO 14001:2015 environmental management standards.

Due to the nature and complexity of our work, the waste produced, and the dynamics of change management, a solid system is required to be in place, many times even above standard, which not only mitigates environmental risks to an acceptable level but also provides an emergency response when a risk is realised. We now measure environmental aspects and impacts, and besides hazardous waste segregation, we perform other types of segregation for the benefit of and minimising our carbon footprint. Meanwhile we are witnessing environmental regulations becoming stricter and expect this to continue in the years ahead. It is everyone's responsibility, and even more so the duty of industries like ours, to minimise our impact on the environment.

We do not anticipate that environmental regulations will become a limiting factor in our project redeliveries to our clients. Instead, we are working towards aligning ourselves with these regulations, provided there is sufficient time to react and adapt to each new requirement in order to process it effectively.

We have witnessed some delays in importing or distributing certain goods due to the authorities' increased control of said items. In these cases, we are hopeful and believe that said processes will smooth out over time due to as the experience develops. To the extent that it is feasible, we have a proactive approach in having the necessary documentation in place in a timely manner to avoid unnecessary delays and meet the requirements of our clients.

Further, we are currently transitioning towards green and responsible vessel recycling according to the highest applicable standards of the ISO 30000, Hong Kong Convention, and EU regulations. Thus, not only do we offer our clients a means to recycle their assets responsibly, but we also lay the groundwork for the cyclical ecosystem between owners/yard/steel mills in the local market and foster a green culture in the way we do things within our organisation.

What are the most significant challenges regarding a shipyard's infrastructure? Does the increasing size of vessels make you consider developing new infrastructure to accommodate bigger vessels?

One of the most significant challenges in a shipyard facility is its maintenance requirements as it has a large number of fixed and mobile assets oper-

ating in relatively harsh environments while typically working on a 24/7 basis to maximize its business potential. Working round the clock while ensuring smooth operation and production flows means a good control of the shipyard's planned preventive maintenance in order to reduce unplanned downtime ,i.e reactive maintenance.

Planned maintenance work may require the restriction of certain operational activities at times, which further emphasises the need for proper planning and collaboration between the operations and maintenance departments.

Regarding the yard's size, a shipyard's capacity and capability are primarily determined during the planning phase. However, this does not mean that a shipyard cannot expand or increase its ability to meet a demand for larger-sized vessels. A shipyard's size, capacity and capability are primarily determined during the planning phase. However, this does not mean that a shipyard cannot expand or increase its ability to meet a demand for larger-sized vessels. With the proper market and feasibility studies to support the business case, expanding a yard's size to diversify its scope or eliminate docking restrictions to accommodate larger vessels is always a consideration as part of its long-term development.

One of the most significant challenges in a shipyard facility is its maintenance requirements. A yard has a large number of fixed and mobile assets operating in relatively harsh environments.

What risk assessment techniques do you apply to ensure the smooth execution of ship repair work?

Our industry faces numerous risks that must be mitigated to reach an acceptable level within which our company operates. These risks may be related to safety, the environment, the shipyard facility, or other business aspects. Depending on the category, we use separate or combined risk assessment techniques along with our risk matrix, which quantifies them. Said assessment techniques may complement each other to achieve the best result. Project risk identification process begins with a commercial enquiry, which then steps into the estimation stage, including a risk assessment, scope analysis, and contract review. If required, we perform HAZID/HAZOP or other assessments applicable to particular tasks. Depending on the specific project, we may use tools such as a project charter as part of the project's take-off. The project charter typically includes an analysis of the project's fundamentals to define critical aspects such as scope, deliverables, dependencies, planning milestones, funding, constraints, known risks and mitigations, simultaneous operations (SIMOPS), communication strategy, management of change, etc. During the roll-out phase, our work is executed through a permit-to-work system, which includes work-specific risk assessments that can be detailed further for specific tasks - as identified during a HAZID/HAZOP study or depicted in the project charter, for example.

After completing a project and during the closing phase, we hold sessions to analyse the learning opportunities and proceed accordingly to a separate "lessons learned" process.

How does rising inflation affect a shipyard's negotiations with shipowners and suppliers?

Besides the demand/supply balance, which determines or alters the price of materials, inflation is another key element that may affect the shipyard's competitiveness and negotiation ability, as both directly impact the cost of services provided. For example, there have been price increases in raw materials such as steel, which heavily depends on the demand/supply chain. Depending on the geographical position, we now see inflation spiking in many countries due to the effects of recent geopolitical events on energy prices.

In the Kingdom of Saudi Arabia, inflation rates are within the normal range. However, since the shipping industry and shipyards are part of the global supply markets, it is inevitable that shipyards would also be affected in some way. Here at ABIC, we try our best to absorb these price increments and remain competitive by increasing our productivity and efficiency, reducing rework in line with our "Do it right the first time" culture and reduce 3rd party costs through relevant agreements.


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THE HUMAN FACTOR IS HIGHLY VALUED IN SHIPYARDS

by **Vassilis Vassiliou**,
INTERYARDS S.A.

How do you approach the human factor issue? Do you have any initiatives underway to attract, train and retain employees at your facility? Are you concerned about the labour shortages in many shipyards around the world?

It is well known that shipyards are labour-intensive businesses heavily dependent on the built-in expertise of highly skilled management personnel and low-cost manpower. So, shipyards highly value the human factor - their unique combination of talented, skilled personnel and non-experienced workers.

This highly skilled personnel - mostly well-trained locals dedicated to the field - is usually involved in the shipping business for many years. Fortunately, there is no shortage of such personnel.

On the other hand, shipyards experience severe shortages in unskilled personnel. In most developed countries, unskilled workers must be sourced abroad to be cost effective. The demand for such workers fluctuates, so to find them, shipyards need to be flexible. For this reason, they have been developing special training courses to provide their workers with the basic skills required in the shipyard industry, such as welding, staging, crane lifting, and assembling, while at the same time preparing them for a highly unsafe work environment.

During the pandemic, we noticed that these workers returned to their countries due to the prevailing circumstances. As such, there was a growing shortage of workers worldwide, which in most countries still has a long way to go before it is overcome.

How are environmental regulations impacting your business?

There is a growing trend in shipyards worldwide towards adopting environmentally-friendlier procedures and methods regarding the disposal of used/hazardous materials and ship repair techniques.

We have seen that most ship-repair facilities show a strong interest in some of the following:

- Used paint cans disposal
- Removal / Disposal of asbestos material, used in the past onboard ships mainly for insulation purposes
- A complete transformation through grind-blasting, hydro-blasting, or slurry-blasting methods (slurry blasting: the use of grind-blasting combined with a water jet). By using these methods, yards control or eliminate the grinding dust.

A complete grind-blasting treatment cycle is relatively expensive when all

the proper environmental procedures are followed, such as using a water curtain, covering exposed areas after blasting, cleaning up and disposing of the used grid before the vessel's undocking.

Looking at just a fraction of the new environmental regulations, it becomes obvious that as they are enacted, repair costs and the time spent on projects increase, resulting in unfair competition between the shipyards that implement them and those that do not.

What are the most significant challenges regarding a shipyard's infrastructure? Does the increasing size of vessels make you consider developing new infrastructure to accommodate larger vessels?

During the designing phase, shipyards always take into consideration new trends and rising markets when deciding on the type of infrastructure and the size of drydocks. In general, even larger-sized vessels have a wide range of options for being repaired worldwide. Obviously, the larger the vessel, the fewer worldwide options it has to be repaired, even though this is not considered a big challenge. In the rare cases where a relatively large, specialised vessel radically changes its trading pattern, shipping companies have to slightly increase the vessel's deviation from its trading area to have repairs carried out. At the same time, shipyards must adapt to and gain experience in the specialised work scope. Fortunately, this is a fairly quick process.

We rarely see shipyards improving or expanding their existing docking infrastructure, which is a costly and time-consuming process, only seen in regions where the overall demand for ship repairs has increased substantially. It has recently happened in Turkey and the Med region, but it was due to general market needs rather than individual business initiatives.

What risk assessment techniques do you apply to ensure the smooth execution of ship repair work?

It is interesting to see to what extent risk assessments and the related mitigation plans are used in the shipyard environment. To my understanding, they are mainly implemented for safety reasons only since most works carried out in a yard have passed a risk assessment analysis to ensure their safe execution and are not used to manage unforeseen factors that may cause delays in repair times or increase costs

How does increasing inflation affect a shipyard's negotiations with shipowners and suppliers?

Historically, shipyards have always faced challenges during heavily inflated markets. On the one hand, shipyards have to manage continuously increasing costs. On the other, they have to manage the expectation of shipping companies for stable prices with contracts agreed upon much ahead of their vessel's arrival at the yard.

That being the case, shipyards decide to raise their prices and thus maintain a safe profit margin assuming that costs will increase. Alternatively, they try to attract shipping companies with lower prices and manage the losses by undertaking additional regional projects. Large shipyard groups usually follow the first practice as they can support higher prices. In contrast, the second practice is often seen in small second-tier yards that seize the opportunity to attract opportunistic projects.

ASIAN SHIPYARDS

THE SELECTION CRITERIA OF THE GREEK-CONTROLLED FLEET

IN THE SPOTLIGHT

An analysis by: Manos Charitos
Data processing: Orestis Papadimitriou

Asia as a continent is the undisputed world champion in commercial shipbuilding as the vast majority of ocean-going ships are built in one of the top three shipbuilding countries: South Korea, China, and Japan.

The following analysis focuses on the shipbuilding industry, specifically the shipyards that have built the ships that make up the fleet managed by companies established in Piraeus/Athens.

The data has been drawn from the Greek Shipping Directory and concerns the registered fleet up to April 2022. Furthermore, the shipyards have been categorised into groups based on the information available on their websites or provided by other authoritative sources.

It is noted that the categorisation was based on recent data. Therefore, some of the said fleet's ships may have been built at a shipyard before it became part of a shipbuilding group. But even if a shipyard joined a group later, it is considered that these ships come from the respective shipyard group.

The Piraeus/Athens fleet

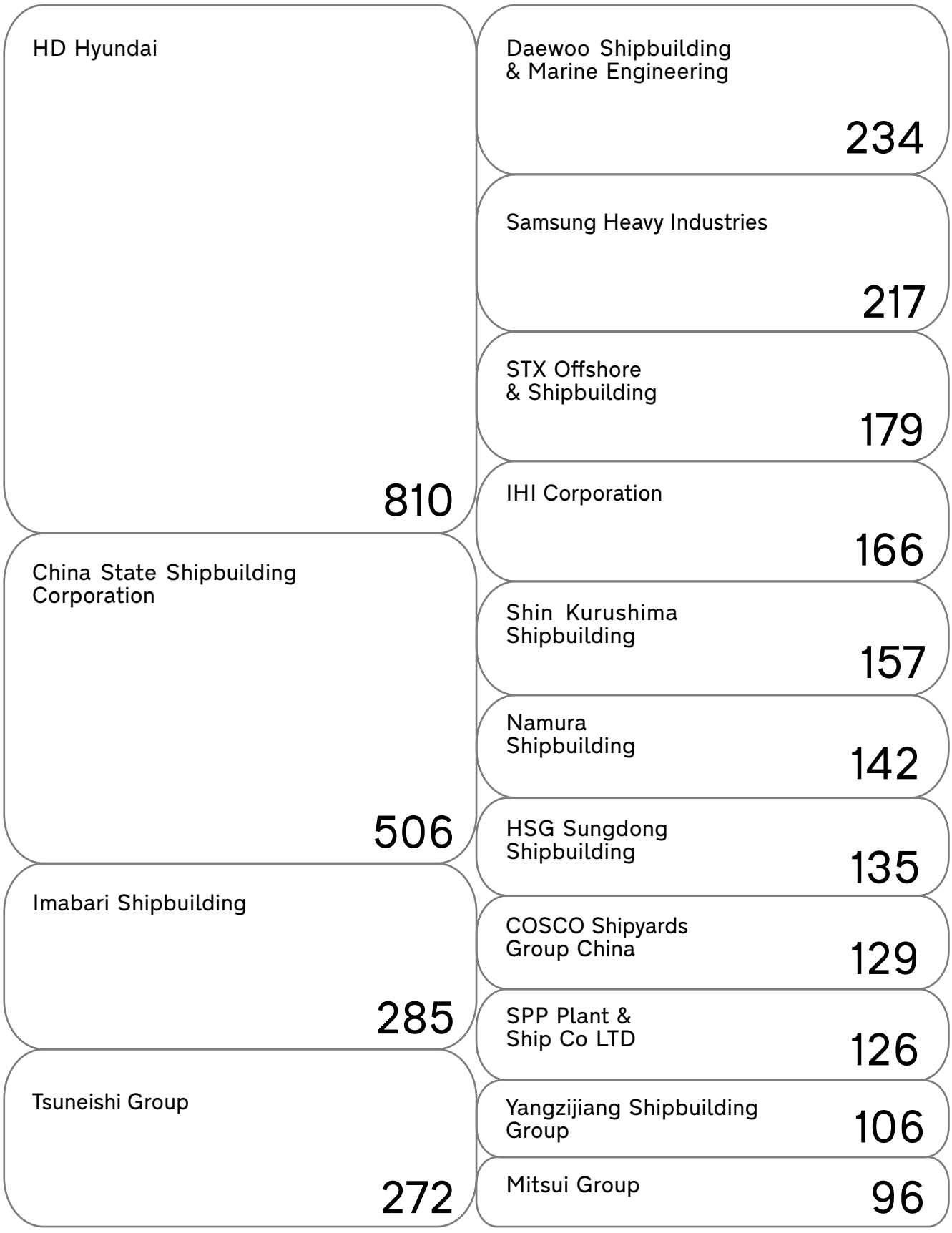
More than 500 ship management companies are operating in Piraeus/Athens. The joint fleet managed by these companies consists of 5,191 ships with a cumulative capacity exceeding 441 million dwt. 92% of this fleet's ships have been built in South Korea, China, and Japan.

This fleet of 5,191 ships has been built by roughly 150 shipyards or shipbuilding groups, 55 of which have each constructed more than 10 of the fleet's ships, while their majority holds a small share of the said market.

The top 15 shipbuilding groups

According to our findings some shipbuilding groups stand out due to the number of ships they have built for management companies with offices in Piraeus/Athens. Specifically, the top 15 shipbuilding groups (hereafter referred to as the top 15) have built 3,560 ships of the fleet managed from Piraeus/Athens with a total capacity of 347.72 million dwt, which corresponds to 69% and 79% of the fleet in terms of ship numbers and tonnage, respectively.

Figure 1: Breakdown of the top 15 shipbuilding groups by the share of the fleet's ships they have built cumulatively



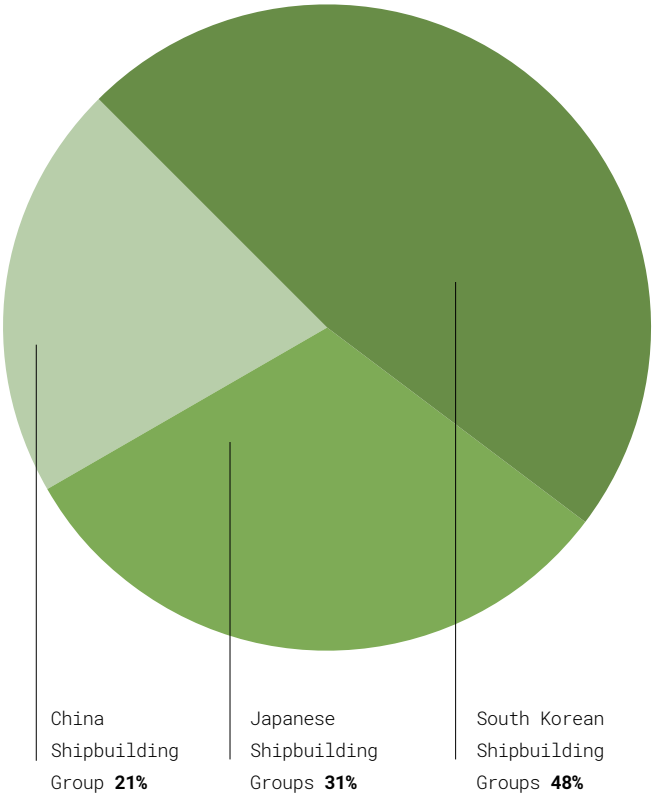
Six of the shipbuilding groups in Figure 1 are based in South Korea, three in China, and the remaining six in Japan. At this point, it should be mentioned that several of these groups' shipyards also have facilities in other countries. The South Korean shipbuilding groups HD Hyundai, Samsung Heavy Industries, and Daewoo Shipbuilding & Marine Engineering, which have built 73 of the fleet's ships outside South Korea, are typical examples. Furthermore, the Japanese group Tsuneishi has constructed 102 ships in its facilities outside Japan, in the Philippines and China, to be specific.

South Korean shipyards are the Piraeus-managed fleet's first choice, with almost half of its ships built in the top 15 groups' shipyards (48% - 1,701 out of 3,560) coming from the facilities of South Korean groups. In second place is Japan, with a corresponding percentage of 31%, and in third place is China with 21%.

Relating to specific shipbuilding groups, HD Hyundai indisputably holds first place. The said shipbuilding group has built 810 of the Piraeus/Athens-managed fleet's ships. Therefore, of the 3,560 ships built by the top 15, HD Hyundai accounts for 23% - almost one in four ships.

As regards the capacity of ships built by the top 15, it is worth noting that the shipyards of the South Korea-based groups have constructed 54% of the total capacity.

Figure 2: Distribution of ships built by the top 15 shipbuilding groups by group country



The type of ships on which the top 15 concentrate

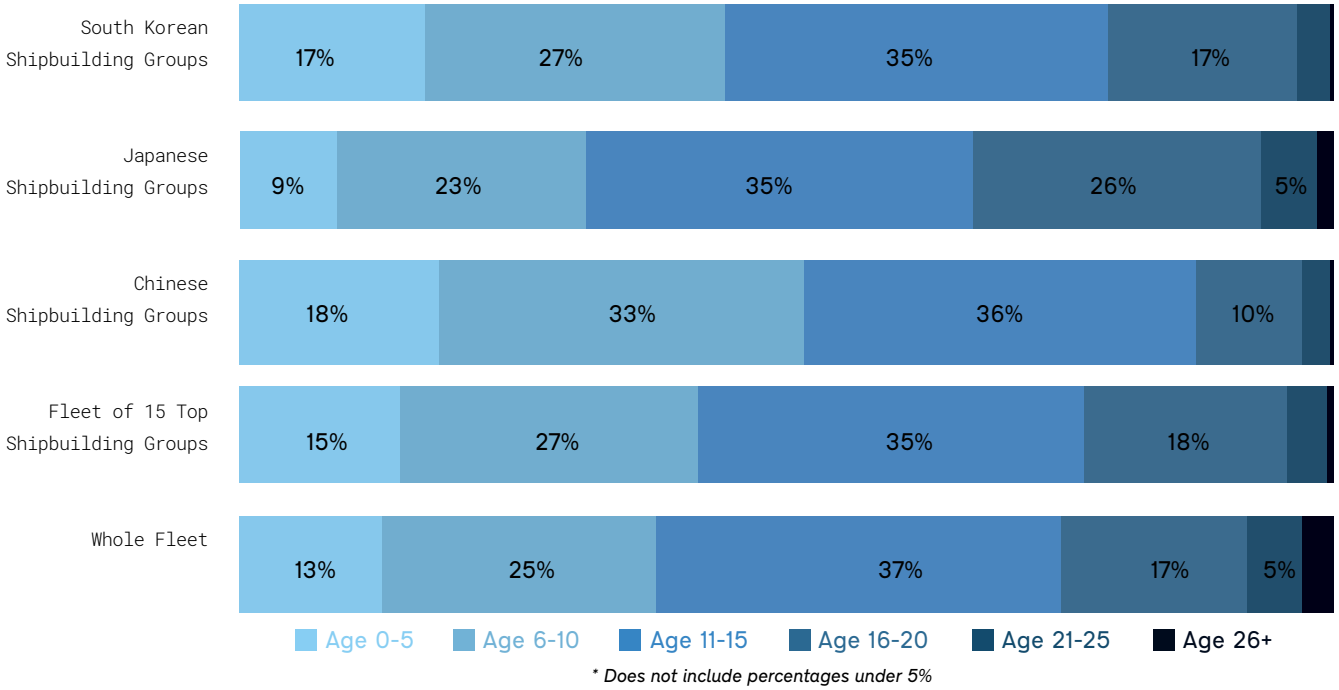
South Korean groups
South Korea has strategically invested in becoming a top choice for high-end newbuildings like tankers and LNG carriers. 863 (or 74%) of the 1,166 fleet tankers built by the top 15 were constructed by South Korean groups. The corresponding figure for LNG carriers is 132 (or 96%).
However, South Korean shipyards also have an extensive shipbuilding portfolio and are highly active in the construction of bulk carriers and containerships. On average, tanker construction makes up 51% of the shipbuilding portfolio of the South Korean groups included in the top 15.

Japanese groups
Japan has traditionally been closely connected with the investment ventures of Piraeus-based shipping companies. Even during Japan's first forays into the shipbuilding arena, many companies invested in the opportunities offered by Japanese shipyards and their prospects as flagship shipbuilders. Japan has developed a competitive advantage in building bulk carriers, maintained to this day, despite the rise of Chinese shipyards, particularly in smaller bulk carriers, which, due to their need for commercial flexibility, constitute a more complex shipbuilding undertaking.
Japanese groups have built 49% of the bulk carriers constructed by the top 15, reflecting investor preferences. Unlike the South Korean groups, the Japanese focus almost exclusively on bulk carriers. 79% of all vessels built by the Japanese shipbuilding groups listed among the top 15 are bulk carriers. Tankers also play an important role in their shipbuilding portfolio, accounting for 18% of their total portfolio.

Chinese groups
Chinese shipyards, like the Japanese, focus mainly on building bulk carriers. Of the 741 ships built for the Piraeus/Athens-managed fleet by the three Chinese groups listed among the top 15, 70% are bulk carriers.
The Chinese groups have also played a significant role in constructing the fleet's containerships, as 30% of these were built by Chinese groups.

The age profile of ships
The age distribution of the ships built by the top 15 does not differ significantly from that of other ships in the Piraeus/Athens-based fleet.
More specifically, 13% of the fleet is up to five years old, while the respective percentage for the fleet's ships built by the 15 top reaches 15%. 25% of the fleet is between six and ten years old, whereas the respective percentage for those constructed by the top 15 is 27%.
The age distribution of the ships built by the top 15 groups per country is of greater interest. Of the vessels constructed by Chinese groups, 51% are up to 10 years old. The corresponding percentage for those built by all the top 15 groups is 42%, while for the total Piraeus/Athens-based fleet, it is 38%. These figures reflect the rise of Chinese shipbuilding groups over the past ten years.
In contrast, 32% of the ships built by Japanese groups within the top 15 are up to ten years old, while the corresponding percentage for the ships built by the top 15 is 42%. This indicates the declining competitiveness of Japanese shipyards as a shipbuilding choice.

Figure 3: Distribution of ships built by the top 15 shipbuilding groups by country and ship age



** Does not include percentages under 5%*

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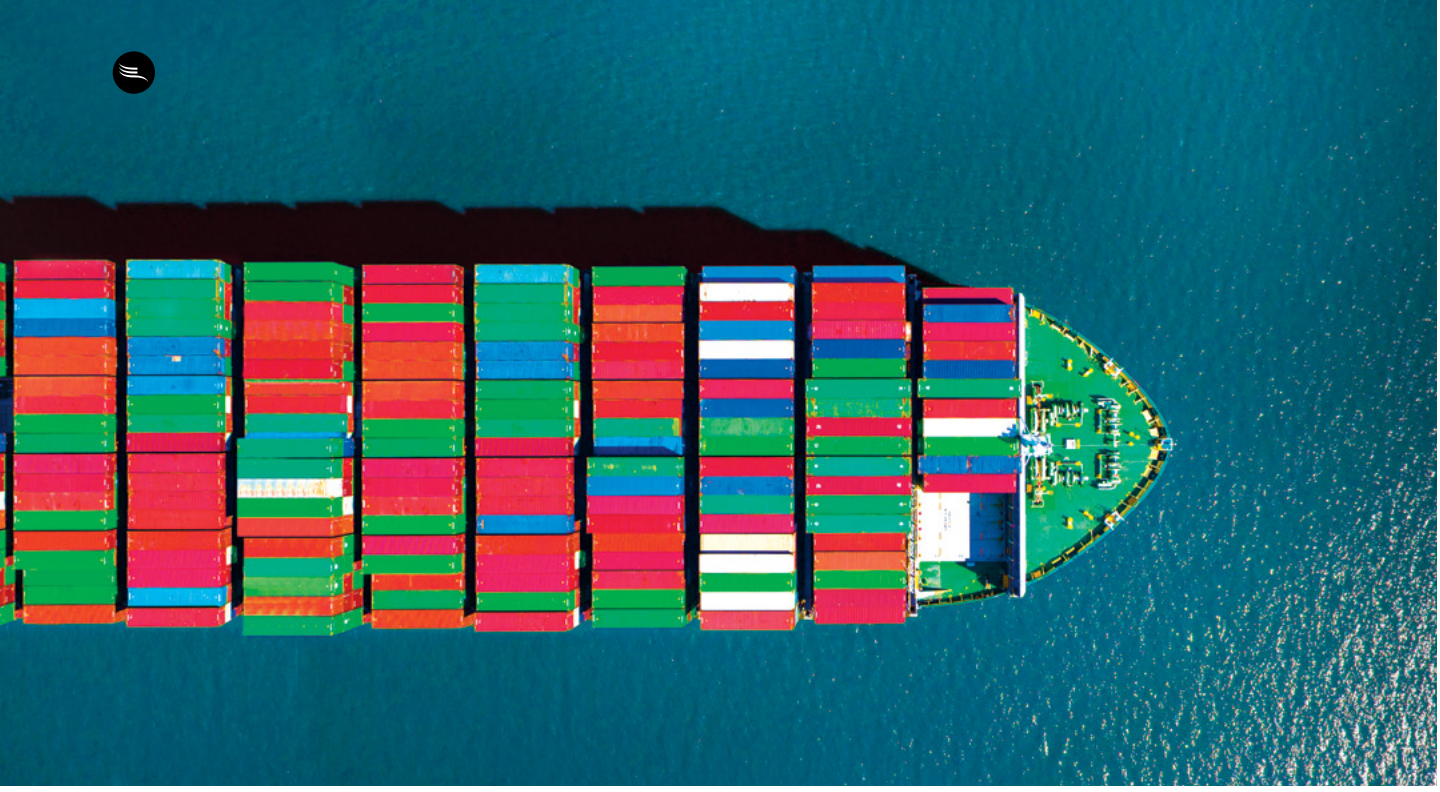

Levels of shipbuilding group concentration by country
The fact that the top 15 shipbuilding groups have built 69% of the fleet exemplifies the increasing concentration within the shipbuilding industry. However, the concentration levels in the three countries examined are different. In the case of South Korea, the country's shipyards among the top 15 have built approximately 89% of the fleet managed by companies operating in Piraeus/Athens constructed in that country. The corresponding figures for China and Japan are 55% and 69%.

The "loyalty" factor
At country level
The specialisation of specific countries and shipyards in building particular types of ships has been one of the factors determining the balance in the shipbuilding industry. In this context, the fact that many companies choose to manage ships built in specific countries is indeed interesting, although not necessarily surprising.
242 of the 448 companies in this survey are managing ships built by one of the top shipbuilding groups: 35% of these companies operate fleets whose ships have been built mainly by South Korean shipbuilding groups. The corresponding percentage for Japanese and Chinese groups is 48% and 17%.
Of the companies whose fleets consist of at least five vessels built exclusively or mainly by South Korean groups, the vast majority operate tankers and gas carriers. However, most companies of this size that choose Japanese shipbuilding groups manage bulk carriers. Finally, companies that significantly prefer Chinese shipbuilding groups operate bulk carriers.

At Group level
Several companies operating in Piraeus/Athens seem to prefer specific shipbuilding groups over others. Of the 448 companies that manage ships built by the top 15, 154 (or 34%) manage ships constructed exclusively by one of the top 15. It should be noted that although their fleets may consist of ships also built by other shipyards/shipbuilding groups, these do not belong to the list of the top 15.
At the top of this category is HD Hyundai, with the South Korean group enjoying the proven trust of 32 companies. In second place is the gigantic China State Shipbuilding Corporation, the first – and marginally only – choice for 28 companies. The Imabari Shipbuilding Group remains in third place with 22 companies.
Of the shipping companies managing larger fleets, most choose the South Korean giant HD Hyundai, and their fleets consist mainly of tankers and gas carriers. On the other hand, those who prefer the Chinese CSSC group mostly manage bulk carriers, as do the companies that choose the Imabari Group.

Figures to remember:

- The top 15 shipbuilding groups have built 3,560 (or 69%) of the 5,191 ships managed by companies operating in Piraeus/Athens
- 1,701 (or 48%) of these 3,560 ships were constructed by six South Korean shipbuilding groups
- Of the 137 LNG carriers built by the top 15, 132 (or 96%) were built by South Korean shipbuilding groups
- One in two commercial (51%) built by Chinese shipbuilding groups is up to ten years old
- Eight out of ten ships (or 79%) built by Japanese shipbuilding groups are bulk carriers.
- 242 companies operating in Piraeus/Athens strongly prefer country-specific groups, and 154 prefer specific shipbuilding groups.

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CHANGES IN VESSEL VALUES IN THE FIRST HALF OF THE YEAR

Edited by: Manos Charitos
Data provided by: VesselsValue

Vessel values have been on an upward trend since the beginning of 2022. According to recent VesselsValue data, provided exclusively to Naftika Chronika, larger vessels recorded the most significant increases in value among all vessel types. In the first half of the year, the value of Capesize and Panamax newbuilds went up by 6.85% and 4.68%, respectively. On the other hand, smaller-sized Supramax and Handysize vessels' values remained at levels similar to those prevailing at the beginning of the year. The bulk carrier freight market booked positive growth during the year's first half, and despite the downward trend recorded in the past few weeks, its short-term outlook remains positive.

At the same time, medium or smaller containership newbuilds values have remained relatively like those at the beginning of the year, except for those of 23,000 TEUs carrying capacity, which registered a 5.82% increase. The containerships freight market entered 2022 dynamically, continuing on the explosive course it started in 2021. At the end of February, the first signs of a correction appeared and gradually intensified. Sector profitability is expected to remain high throughout 2022, although it is predicted that the containership market will face supply-focused challenges from 2023 onward.

So far this year, the tanker market has recorded a significant increase in vessel values, particularly in smaller and larger-sized vessels, relative to bulk carriers and containerships. In the year's first half, the value of newly built LR1 and MR tankers increased by 10.21% and 8.97%, respectively, while the value of VLCC newbuilds went up by 8.19%. The tanker charter market, characterised by sluggishness in the first half of the year, is now showing signs of growth, and there is optimism about its short-term outlook.

At the same time, LNG carrier values have increased significantly, except in the case of small-size vessels. In particular, the value of newly built Qmax LNG carriers with a 266,000 cubic meters transport capacity increased by 11.87% in the year's first half. The values of LNG carriers with a transport capacity of 215,000 cubic meters

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and 174,000 cubic meters have also increased by 11.75% and 11.52%, respectively. LNG carriers currently fetch high freight rates, albeit below the record levels of 2021. As is now evident, LNG will play a critical role in the global economy. That may be particularly true for the economy of Europe, where countries are trying to reduce their dependence on Russian natural gas. Thus, the LNG market's short-term and medium-term outlook remains optimistic.

The world's most expensive vessel ordered in the first half of the year

With ULCVs' values on an upward trend this year, and seeing that containerships and gas carriers have traditionally been the most expensive newbuilds, the contenders for the "most expensive ship" ordered in the first half of the year were mainly containerships and LNG carriers rather than bulk carriers and tankers.

According to the same VesselsValue data, the title for the most expensive ship of the year went to a Japanese Ultra Large Container Vessel. Among the orders clinched by Japan's Imabari Shipyard, there were three for a total of four ULCVs, each valued at $255 million: Doun Kisen has placed an order for two such ULCVs, and Nissen Kaiun and Shoei Kisen have each placed an order for one such vessel. Unsurprisingly, the orders for the most expensive ships for the year's first half were placed with Japanese shipyards. As widely acknowledged, unlike Chinese shipyards, the Japanese shipbuilding industry's competitive advantage is the technological sophistication and high specifications of the ships it builds, not its low prices.

The top five shipbuilding companies in the first half of the year

The top five shipyards in the world for the first half of the year were Asian, namely South Korean and Chinese. According to VesselsValue's data the top five shipyards received orders for 128 ships worth approximately a total of $24.65 billion.

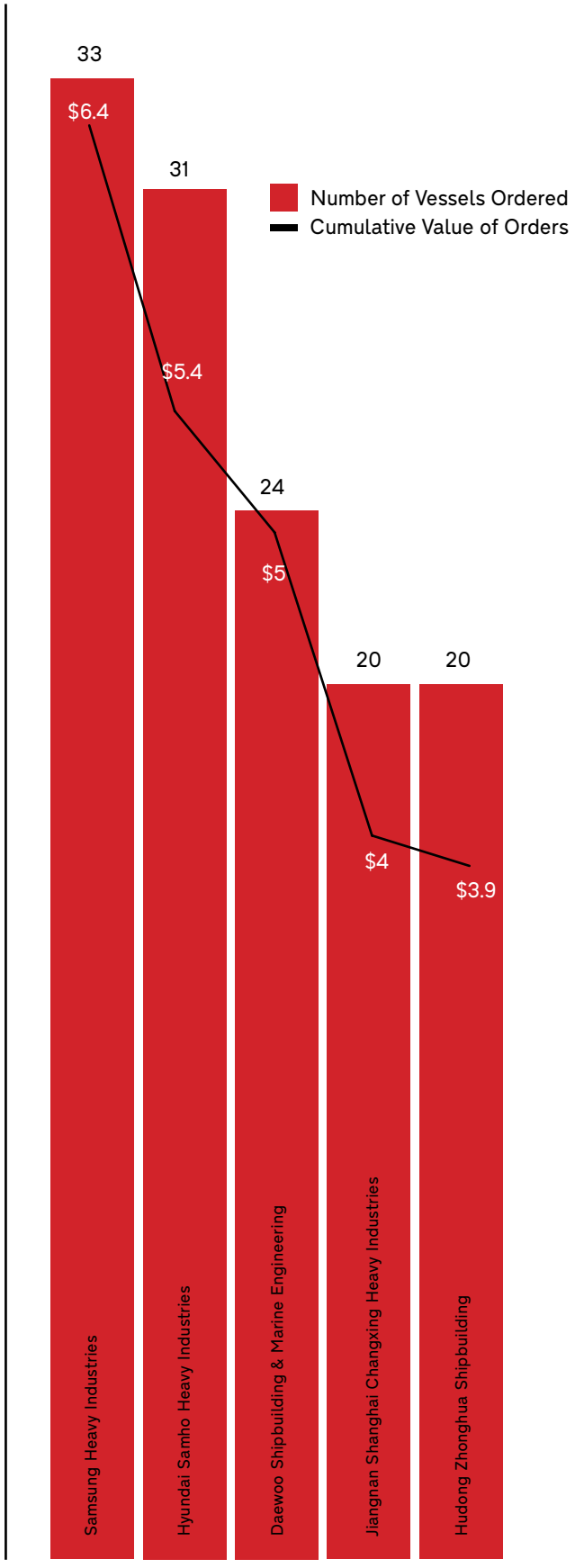
In more detail, the world's leading shipyard for the year's first half was Samsung Heavy Industries (SHI), which won orders for 33 ships that brought in $6.35 billion. The shipyards in second and third place were also South Korean: Hyundai Samho Heavy Industries (31 orders worth $5.4 billion) and Daewoo Shipbuilding & Marine Engineering (24 orders worth $5 billion).

Based on the above, the orders placed with South Korean shipyards account for 69% of the ships and 68% of the value of the total orders won by the world's top five shipyards in the first half of the year.

In fourth and fifth place came two Chinese shipyards, both subsidiaries of the Chinese giant China State Shipbuilding. Jiangnan Shanghai Changxing Heavy Industries and Hudong Zhonghua Shipbuilding cumulatively won orders for 40 ships with a total value of $7.9 billion, accounting for 31% of the ships and 32% of the order value of all the orders placed with the world's top 5 shipyards in the year's first half.

The picture emerging at the top of the shipbuilding arena shows only two first-place contenders: South Korea and China.

Figure 1 The top five shipyards in the world for the first half of 2022 based on orders received: orders are expressed in numbers and billions of USD



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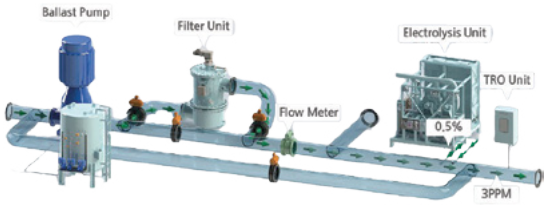

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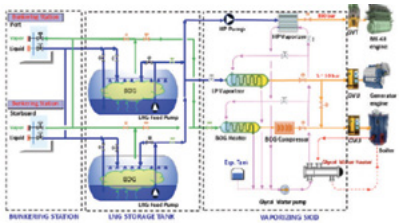

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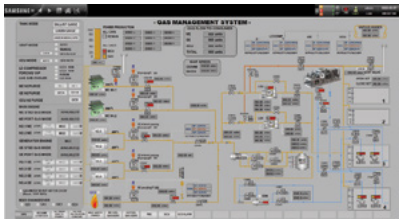

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The benevolent work of the Greek shipping family

Edited by:
Panagiotis Korakas

"REVOLUTION 21 REFRAMED: THE FLOATING EXHIBITION" COMPLETES ITS COURSE

On Sunday, 31 July 2022, the exhibition "Revolution 21 Reframed: The Floating Exhibition" was concluded with an event held at the Naval Tradition Park in Paleo Faliro, in front of the legendary battleship "Averof".

"Revolution 21 Reframed: The Floating Exhibition" was part of the Historical and Ethnological Society of Greece and the National Historical Museum's versatile anniversary programme commemorating the 200 years since the beginning of the Greek Revolution. The exhibition was organised by the Historical and Ethnological Society of Greece - National Historical Museum (HESG/NHM), the "Maria Tsakos" Public Benefit Foundation- International Centre for Naval Research and Tradition, and Piraeus Bank. The exhibition was hosted onboard the educational sailing vessel "Mania", kindly provided for this purpose by the Tsakos Enhanced Education Nautical School (TEENS).

The "Mania" began its journey on 26 June, visiting 14 Greek islands with the aim of highlighting the naval element of the Greek Revolution of 1821 through authentic relics from the NHM's collections (the cross from the ship of Miaoulis, the grab from Kanaris's torpedo boat, various naval weapons and philhellenic objects dedicated to the Greeks' naval struggle, etc.) as well as digital methods such as short videos, digital

representations of naval battles, prints, etc.
During the 640-nautical-mile journey, the exhibition visited the maritime communities of Chios (Chora and Kardamyla), Oinousses, Lesvos, Lemnos, Samothrace, Agios Efstratios, Skyros, Psara, Syros, Spetses, Hydra, Poros and Aegina. Due to the extreme weather in the third week of the floating exhibition, the "Mania" could not approach Andros as scheduled. In all the ports along the journey, the public was enthusiastic and moved to have the exhibition visiting them, with the number of visitors reaching 4,000.
The exhibition's closing event was held under the auspices of the Minister of Maritime Affairs and Insular Policy, Mr Giannis Plakiotakis, with the Chief of the Hellenic Navy, Vice Admiral Stylianos Petrakis HN, and the Commandant of the Hellenic Coast Guard (H.C.G.), Vice Admiral Georgios Alexandrakis as guests of honour.
During the closing ceremony, Capt. Panagiotis N. Tsakos, the founder of the Tsakos Group, gave a speech thanking the Historical and Ethnological Society of Greece for its initiative and the Bank of Piraeus for its contribution to making "this unique pilgrimage to the Aegean islands". Visibly moved, he continued by saying: "I also thank each and every one of you who participated in the success of this Aegean "Argonautic Expedition" of ours, even if it is by just honouring us with your presence tonight".
Speeches were also made by the Chairman of the Board of the "Maria Tsakos" Public Benefit Foundation – International Centre for Maritime Research, and Secretary-General Emeritus of the IMO, Mr Efthimios Mitropoulos and the guests of honour Vice Admiral Stylianos Petrakis HN and Vice Admiral Georgios.
Following those addresses, a first assessment of the overall initiative was made by Mrs Dimitra Koukiou, Deputy Director of the National Historical Museum, who represented NHM throughout the exhibition. Mrs Koukiou's speech was followed by a short address by Professor Maria Efthymiou, the well-known Historian of the National and Kapodistrian University of Athens, who had given lectures about the 1821 Uprising on most of the islands visited by the exhibition.

AIKATERINI LASKARIDIS FOUNDATION: SUPPORT FOR FIRE-AFFECTED AREAS CONTINUES WHILE A NEW DONATION TO THE HELLENIC NAVY ENSURES THE RENOVATION OF THE ATHENS NAVAL HOSPITAL

As part of its health support programme for the residents of remote villages in the Municipalities of Istiaia-Edipsos and Mantoudi-Agia Anna-Limni, the Aikaterini Laskaridis Foundation has procured and delivered a number of much-needed defibrillators that will allow the provision of immediate treatment in emergencies. The triggering event was a recent emergency incident involving a resident of North Evia. This person's life had been endangered as the closest doctor or Health Centre was a long distance away. The delivery of the defibrillators took place in the square of Kokkinomilia on 28 July 2022, after the staff that would be using them had received the necessary training from specialised medical personnel.
Following the delivery of the medical equipment, a direct consultation was held with the residents of Kokkinomilia to inform them about the Aikaterini Laskaridis Foundation's structured and well-developed plan for coordinated reforestation around the village. This plan aims to protect the environment but also create additional income for residents through the type of trees that will be selected.
At the same time, the leadership of the Foun-

dation decided to make another donation to the Hellenic Navy, this time for the upgrade and renovation of the Athens Naval Hospital. In this context, on Tuesday, 26 July, an agreement was signed by the President of the Aikaterini Laskaridis Foundation, Honorary Rear Admiral Panagiotis Laskaridis, and the Chief of the Hellenic Navy, Vice Admiral Stylianos Petrakis HN. The upgrade of the Athens Naval Hospital will include the creation of a Cardiology Clinic, a Short-Term Hospitalization Ward, and the modernisation of Ward 3B facilities. The agreement was signed in the presence of the Minister of National Defense, Nikos Panagiotopoulos, the Deputy Minister of National Defense, Nikos Hardalias, and the Chief of the Hellenic National Defence General Staff, General Konstantinos Floros.

THE ONASSIS FOUNDATION HAS ANNOUNCED THE BENEFICIARIES OF ITS 2022-23 SCHOLARSHIPS FOR THE UPCOMING ACADEMIC YEAR

The Onassis Foundation "City of Tomorrow" has once again opened its doors to welcome young people with innovative ideas and bright minds to inhabit it. This year, as every other year since 1978, the Onassis Foundation welcomes the 95 new scholars that will be the City of Tomorrow's new inhabitants. The Foundation will support them throughout their journey so they feel free to open up new avenues with their ideas – to expand the sciences we know and the ones we will come to know. The 95 newcomers and another 7,408 inhabitants of the City of Tomorrow will be taking steps forward and changing society for the better.

For the academic year 2022-23, the Onassis Foundation has a total of 95 scholarships: 81 for international studies (45 for postgraduate and 36 for doctoral degrees) and 14 for postgraduate studies in Greece. The selection, whose criterion was academic excellence, was made by leading Greek and international scientists, university professors, and academics within the framework of a merit-based evaluation. This year, emphasis was placed on academic fields that have emerged to meet the needs of the present day, such as Earthquake Engineering, Machine Learning & Artificial Intelligence, Robotics, Special and Inclusive Education, Computational Archaeology and Transplantation Research. The selected fields and specialisations are all connected to the Onassis Foundation action areas, which focus on innovation and breakthrough technologies. In its announcement, the Foundation said, "We hope that the City of Tomorrow will grow with each passing year, filling with innovative new ideas and beautiful minds"

STAVROS NIARCHOS FOUNDATION: PARTNERSHIP TO EXPAND QUALITY CANCER TREATMENT FOR CHILDREN ACROSS BORDERS

The Stavros Niarchos Foundation's (SNF) more than $750 million Health Initiative represents a global effort to enhance access to quality pub-

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lic health care for everyone—regardless of their place of origin or socioeconomic background—with a special focus on children and the most vulnerable among us. In the spirit of sharing international expertise and enhancing quality health care across borders, SNF and the King Hussein Cancer Foundation (KHCF) and Center (KHCC) have launched a partnership in support of children from across the Middle East who are in need of cancer treatment and care, as announced during the 2022 SNF Nostos Conference. Through a dedicated $3 million grant, SNF will support the lifesaving work of KHCF/KHCC in Amman, Jordan, providing cancer treatment and care to children from across the region who would not otherwise be able to access it.

"We couldn't be prouder of our new partnership with KHCF/KHCC, which makes it possible to provide care to pediatric cancer patients in need, and we look forward to creating new pathways of collaboration between KHCC and the new SNF University Pediatric Hospital of Thessaloniki," said SNF Co-President Andreas Dracopoulos at SNF Nostos Health, held in June 2022. "This is part of our growing effort to connect the dots between hospitals providing excellent, human-centred cancer care, especially to children, like Sant Joan de Déu Children's Hospital in Barcelona," he added.

The SNF University Pediatric Hospital of Thessaloniki is one of three new hospitals being created in Greece as part of the SNF Health Initiative, which also includes other infrastructure projects, procurement of state-of-the-art equipment, educational programs for health professionals, and major initiatives on mental health. The Health Initiative began in Greece but has since expanded globally through the collaboration with expert and inspiring partners like KHCF/KHCC.

THE COSTAS M. LEMOS FOUNDATION AND THE JOHN S. LATSIS PUBLIC BENEFIT FOUNDATION SUPPORT FREE TRAINING AND CONSULTING OPPORTUNITIES FOR NGOS

The IGGS (Higher Incubator Giving Growth & Sustainability) non-profit organisation has announced this year's application start date for the Incubator, GSE Incubator, and the new thematic Green & Sustainable Development Accelerator programmes. HIGGS' specialised programmes aim to support civil society organisations by offering free training and consultancy.

After 7 years of successfully running the Accelerator program, HIGGS has launched the Green & Sustainable Development Accelerator (GSD Accelerator), a new thematic series. This new 'accelerator' is aimed at NGOs and Social Cooperative Enterprises (SCEs) operating exclusively in green and sustainable development areas or as part of their broader activity.

Following the successful steps of the previous series, the GSD Accelerator aims to support organisations in strategy, business planning, formulating proposals and financial viability reports. The program has a 6-month duration and includes free training and consultation, workshops with experts from Greece and the USA, as well as access to specialised NGO support platforms.

The GSD Accelerator, starting in November 2022, will be implemented over 2 trimesters, each focused on specific thematic modules, beginning with an intensive 2-week boot camp. The HIGGS Green & Sustainable Development Accelerator program is offered free of charge to (up to) 8 environmental/sustainable development non-profit organisations. The major donors of the Accelerator programme are the Costas M. Lemos Foundation and the John S. Latsis Public Benefit Foundation.

*The application period for all three programmes (Incubator, GSE Incubator and Green & Sustainable Development Accelerator) started on Monday, August 29 and will end on Friday, September 23, 2022.

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The love of expatriate Greeks for their ancestral land is a critical denominator in strengthening local welfare and social assistance actions.
The support of many important high-profile and less prominent Greeks residing in Greece and abroad is of particular interest when it concerns actions that support religious institutions with a tangible impact on their communities, in the true Christian spirit and as taught by the Holy Fathers.
In this context, at the kind invitation of John M. Hadjipateras, the editorial team of Naftika Chronika visited The Holy Cenobium of the Annunciation of the Mother of God in Ormylia, Chalkidiki, and the Panagia Philanthropini Centre and found out about the monastery's history and the centre's divinely inspired work in providing medical services to the local community and the wider area.

PANAGIA PHILANTHROPINI SPIRITUAL & MEDICAL CENTRE:

THE MARITIME COMMUNITY'S UNKNOWN CONTRIBUTION

The Ormylia Monastery was founded by the blessed Elder Aimilianos in 1974. Forty young women led by a 19-tear-old Reverend Mother followed his example and became monastics. Living in extreme poverty in a dilapidated ruin of a monastic establishment (metochion) that had been abandoned for over 55 years, the sisters, filled with joy and God's grace, established the Holy Cenobium of the Annunciation of the Mother of God, commonly known as the Sacred Convent of the Annunciation, which today numbers more than 120 Nuns.
From the very first years of great poverty, the blessed Elder Aimilianos had been telling the sisters that it was necessary to build a medical and spiritual centre to care for the common folk ('cosmaki') of Chalkidiki's rural regions and beyond. To the sisters, who at that time had barely enough to eat and did not have enough oil to light the votive lamps in the church, what the blessed Elder was asking seemed impossible.
Yet, in the fullness of God's plan, the centre came to pass according to the words of the blessed Elder. The Ioannis Hadjipateras family came to know about the monastery through a mutual friend, the attorney Mr Panagiotis Katsadouris. They met the blessed Elder, the Reverend Mother, and the sisters and became the monastery's first benefactors, moved by their ascetic life and devotion. They generously contributed to building the medical and spiritual centre's main structure, which was blessed and inaugurated as the "Panagia Philanthropini Centre for Social Advancement, Medical Prevention and Research" in 1984.
In 1990 the Panagia Philanthropini Centre began its medical work in providing cervical cancer screening for underprivileged women. Its great success in reaching hard-to-reach populations and recruiting them for medical care was based on high-quality medical service standards and the monastic precepts of love for others and hospitality. These critical factors combined resulted in the women feeling that they were not visiting a secular medical centre but their spiritual family, who loved them and cared for them and their loved ones. This bond of deep trust is the Panagia Philanthropini Centre's strength that continues to grow up to the present time.
Given the increasing number of patients, the need to further augment medical services in the early detection of breast cancer became pronounced. That way, the centre would be able to address the two major risks to women's health. In this context, the Leon Lemos Foundation

donated the Centre's mammography equipment for x-ray mammograms.

As the needs of the Panagia Philanthropini Centre grew, medical equipment and infrastructure investments necessary for the efficient operation of the services were made through the generous donation of the Stavros Niarchos Foundation. The Athanasios and Marina Martinou Foundation, AEGEAS, lovingly contributed to the centre, enabling it to reach more needy and vulnerable populations.

Populations that have benefited include financially needy Greek, minorities, and immigrant women. What they have in common is that they are socially marginalised and at risk of becoming victims because of cultural and social tensions and the challenges of being part of the lower strata of Greek society. The cancer screening program highlights the common concerns of participating women and plays a small but potentially important role in creating solidarity and social cohesion. In addition to native Greek Orthodox Christians, target groups include Turkish, Pomak, and Roma-speaking women.

The Panagia Philanthropini Centre has screened more than 26,000 women and performed 120,000 screening tests and approximately 600,000 mammograms. The target population is 85% rural, predominantly under-educated women from farming communities. These women are often unaware of the risk of breast cancer and do not have other screening options. Without the centre's services, the region's low-income women would only be diagnosed at a late stage, leading to a poor prognosis resulting in unnecessary suffering and invasive treatment.

By detecting early-stage breast cancer and employing less invasive treatments, the centre prevents the deterioration of the social fabric of these fragile populations, keeping women healthy and productive and improving their quality of life.

When funds are available, the centre provides medical care for homeless, immigrant and Roma children. Having travelled hundreds of miles on foot, alone, and often in grave danger, these precious children need loving care and medical attention.

If resources permit, the Centre organises highly technical medical workshops for breast health practitioners, including radiologists, radiology technologists, medical physicists, oncologists, general practitioners, nurses, and lay health practitioners. These workshops are led by breast top health experts from European and American Medical Centres of Excellence. They have

included internationally recognised scientists such as Dr Jo Anne Zujewski, Head of Breast Cancer Therapeutics in the US National Cancer Institute and Ms Nancy Carter Foster, Senior Advisor for Global Health to the United States Secretary of State. Participants serving vulnerable populations have come from Albania, Bosnia, the Czech Republic, Cyprus, Eritrea, Estonia, Hungary, Latvia, Kenya, Poland, Serbia, Slovakia, Syria, and Ukraine. To date, more than 360 medical practitioners have participated.

The American College of Radiology and the United States Department of State have sponsored the travel and accommodation of several prominent experts.

The Center fully adheres to the EU and the US's Quality Control Guidelines on early cancer detection. The high-quality medical services provided by the Centre have been attested through inspections by USA FDA officials and leading EU experts. Indicative of this is the support officially offered by the European Free Trade Association to the Ormylia Centre's early molecular cancer detection, chemoprevention, and supportive Infrastructures. This project's signing ceremony took place at the Centre with the participation of Their Royal Majesties, King Harald and Queen Sonja of Norway, and high-level officials of the EFTA and the governments of Norway and Greece.

Thus, in these momentously challenging times, the Center of Panagia Philanthropini humbly continues its journey of love and hope, providing care to women and children in need.

The Panagia Philanthropini Centre has screened more than 26,000 women and performed 120,000 screening tests and approximately 600,000 mammograms.

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FOR ALMOST 40 YEARS, THE TWO CENTRES HAVE OFFERED SO MUCH TO SO MANY PEOPLE

John M. Hadjipateras,
President, Oinoussai Benevolent Fund &
Director, John C. Hadjipateras & Sons Ltd.

In the early 1980s, my father, Marcos J. Hadjipateras, his brothers Costas, Nicolas and Pantelis, together with their sister Katie, began searching for a worthy beneficiary that would receive the charitable donation that had been bequeathed by their father, Captain John C. Hadjipateras, who had passed away in 1979. My grandfather was born in Oinousses in 1888 and lived his life in Oinousses, Chios, Athens, Montreal, and London. He had financially and morally supported several projects on the island of his birth, focussing primarily on those related to the supply, storage and distribution of fresh water.

His wish was that after his death, his children would make a donation to an area in Greece other than Oinousses, which would benefit the communities of that region. His children consulted the family lawyer, Mr Panagiotis Katsadouris, who presented them with several alternatives. One of Mr Katsadouris's clients was the Monastery of Simonopetra on Mount Athos, affiliated with the recently re-established Annunciation of the Virgin Mary Convent near Ormylia in Halkidiki.

After meeting Elder Aimilianos, Reverend Mother Nicodeme, and the small number of novice Sisters of the Nicodemus Ormylia Convent, the family was moved and impressed by their vision and energy and thus decided to help it grow in size and importance by building the "Panagia Philanthropini (Benevolent Virgin Mary) Spiritual and Medical Centre".

The family were also keen to support the Social Work Foundation (Idryma Koinonikis Ergasias), which was looking for premises to house their new "Centre for the Rehabilitation of Handicapped Children".

After carefully considering the alternatives, they decided to allocate funds to both projects as they fulfilled their late father's wishes.

Thus, in the mid-1980s, the Panagia Philanthropini Medical and Spiritual Centre was built only a kilometre away from the Holy Convent of the Annunciation of the Virgin Mary and began operating and having an immediate impact on the screening and

(L-R)
Brother Charles Anthony, Director, Panagia Philanthropini Center - The Ormylia Foundation, Petros Bissias, Ilias Bissias and John M. Hadjipateras, his wife Xenia and their two daughters standing in front of Captain John C. Hadjipateras's painting.

diagnosis of thalassaemia. Soon after that, a dentistry department began to serve the local community. Since then, the Panagia Philanthropini Centre has grown in size and importance and has developed several other programmes, including breast cancer screening and refugee support and integration.

The family has maintained close ties with the Centre and the Convent's Sisters, always moved and impressed by their energy, enthusiasm, and dedication. Over the years, the family has enjoyed watching the Centre grow and thrive through funding programmes and private donations. http://www.ormyliafoundation.gr/en/

The Hadjipatereion Children's Rehabilitation and Support Centre also began operating during the same period out of the newly constructed purpose-built premises in Metamorphosi, Attiki. The Hadjipatereion has been operating for 37 years. As with the Ormylia Centre, the members of the Hadjipateras family maintain close ties with this Centre and are equally moved and impressed by the staff's dedication, the benefits offered by its programmes, and the successful rehabilitation of so many children with special needs.
https://kasp.gr/en

In the mid-1980s, the family of Capt. John C. Hadjipateras was awarded the Silver Medal of the Academy of Athens for establishing these two centres.

It is our family's proud legacy that our grandfather's wishes were carried out so diligently by his children, thus setting an example and inspiring the descendants of the visionary donor, who are happy that for almost 40 years, the two centres have offered so much to so many people, thanks to the dedication of those who run them.

SAFER MARITIME OPERATIONS: THE CONTRIBUTION OF THE EU SPACE PROGRAMME

Safety at sea and protecting the oceanic ecosystem have long been two of the European maritime sector's top priorities. Today, the EU is developing space services to better answer these priorities. On the occasion of the 1st Pytheas Space Maritime Forum organised by Isalos.net in July 2022, EUSPA in collaboration with the Greek authorities, coordinated a demonstration that showcases the importance of space technologies in Search and Rescue (SAR) Operations. Director for Outreach and Innovation at DG DEFIS, Catherine Kavvada and EUSPA Executive Director, Rodrigo da Costa, watched live the exercise from the Operations Room of the Hellenic Coastguard.

THE CONNECTION BETWEEN SPACE AND THE OCEAN IS CLOSER AND MORE INTACT THAN EVER

by **Katherine Kavvada**,
Director for Innovation and Outreach,
Directorate General for Defence Industry and Space (DG DEFIS) European Commission

Finding out about Pytheas's various capacities as a geographer, astronomer, and explorer, I could not help but think of him as a modern space explorer of a distant era. And then I thought that the times might be thousands of years apart, yet the connection between space and the ocean is closer and more intact than ever.

For all of us, space technologies are part of our daily personal and professional life, which is why the European Union is investing in space systems and applications.

In brief, the EU Space Programme's different components include:

Galileo - the Union's unique navigation system, providing improved positioning and timing information with significant positive implications for many European services and users. It counts more than 3.2 billion users worldwide, which is clear proof of its sheer success and a kind reminder that although GPS was the first, Galileo is the best.

Galileo is complemented by the European Geostationary Navigation Overlay Service (EGNOS) to provide safety-of-life navigation services to aviation, maritime, and land-based users over most of Europe.

Copernicus - the state-of-the-art European Earth Observation programme and the only one in the world that provides data and information on the health of our planet. Users have full, free, and open access to this data, which is also processed to provide a set of services based on reliable and near-real-time information.

GOVSATCOM - a programme that aims to provide secure, cost-efficient communication capabilities to security and safety-critical missions and operations managed by the European Union and its Member States.

Moreover, the Commission recently proposed establishing a sovereign secure space-based connectivity system to provide satellite communication services. It aims to deliver governmental and commercial services to protect critical infrastructures, surveillance, and support for external action or crisis management. Its great differentiators revolve around low latency, a multi-orbital combination of services, global coverage, and cryptography. This secure connectivity programme rests highly on innovation and technological advances, predominantly deriving from the New Space ecosystem.

Finally, the Space Situational Awareness (SSA) Programme aims to protect space infrastructures from collisions and other events like adverse space weather.

With a single Space Programme answering to the needs of secure positioning, observing, informing and communicating securely, the EU is ensuring the sovereignty, resilience, and security of the European citizens.

Beyond space infrastructures, the Commission has a role in stimulating the downstream ecosystem and creating space-based applications and services. Therefore, together with the European Union Agency for the Space Programme, EUSPA, we also actively support European companies to take advantage of the opportunities brought by space technologies.

Today, nobody considers that the smartphone GPS, which is used to locate a

shop, find your way to your next meeting, or look at satellite images of your next vacation destination, is an optional gadget for the happy few. It is mainstream normality for all.

But there are many more such applications. Space is pushing the boundaries of innovation in Europe, and EU space technologies are used in a wide array of applications in various markets.

How are space-based technologies linked with maritime activities?

The answer is through numerous applications that assist a diverse pool of stakeholders - vessel operators, recreational boaters, port authorities, etc. - in their day-to-day operations and activities.

Like every other sector, the maritime industry is sailing toward a greener, more autonomous, digital future.

Let me give some concrete examples of how the European space services are used in the shipping sector:

Firstly, the shipping sector today is facing the risks of increasing port congestion, shortened shipping times, and increasing speeds for container movements, which puts pressure on ships to transport and return containers as quickly as possible and, at the same time, be more fuel efficient. Therefore, optimising the shipping routes' speed and efficiency is critical. And this can be achieved thanks to satellite navigation combined with Earth observation. Concretely, a functional, robust, and accurate navigation solution called" 'Prepare Ships" has been developed based on the features of Galileo signals and the Copernicus Marine Service.

Secondly, there is a ship weather routing application based on Copernicus data that optimises and qualifies forecasts.

Thirdly, we see users becoming more demanding regarding safe, secure, and resilient maritime operations. With the Search and Rescue (SAR) Galileo Service, the maritime community can benefit by reducing the delays in locating a distress beacon from up to 4 hours to less than 10 minutes, which allows faster and safer rescue times.

The Return Link Service (RLS), a unique feature that sends an automatic acknowledgement to people in distress, confirms that their signal has been picked up and located by the rescue services. This impressive service is also part of our answer to the principal maritime community demand for increased safety and security.

Furthermore, the maritime community will benefit from the future space-based secure connectivity system offering global coverage, low latency, and cryptography.

Maritime surveillance and control, emergencies at sea, and the protection of sensitive marine infrastructure as part of crisis management will be the defining areas that will enable governmental and commercial actors to be effective, efficient and resilient.

Automation and IoT will also enable means of transportation to become driverless: Remotely piloted ships are expected to appear between 2025 and 2030 and generate a growing demand

It is abundantly evident that the combined strengths of our Space Programme's components can meet user needs and policies related to all sectors of a sustainable blue economy.

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for secure connectivity. Due to its global coverage capabilities, a secure Satcom system is the only choice to provide these remotely piloted ships with communication and connectivity systems, considering that terrestrial infrastructures cannot be exploited in this case.

It is abundantly evident that the combined strengths of our Space Programme's components can meet user needs and policies related to all sectors of a sustainable blue economy. It is reminded that Greece's long maritime tradition has allowed it to contribute significantly to the EU's Blue Economy.

As regards the 1st Pytheas Maritime Space Forum, the strong presence of younger generation professionals and students was praiseworthy.

Concluding, Pytheas's legendary voyages relied on an almost atavistic sense of connection between the ocean and space, which to this day both remain vast and largely unexplored. But space technologies have seamlessly connected these two fathomless realms to benefit human activity on Earth.

For what it is worth, Pytheas, the legendary geographer, explorer and astronomer, is still proudly sailing with us today!

TOGETHER WE WILL LEAD GREECE TO THE NEW SPACE ERA

by **Athanasios Staveris-Polykalas**
Secretary General of Telecommunications and Post, Hellenic Ministry of Digital Governance

Greece is world-famous primarily for its role as a top maritime nation with an elaborate affiliated maritime industry. Shipping is one of the country's most significant and productive sectors, allowing it to maintain its leading position in terms of quantity and quality. The ships of the Greek-owned fleet represent around 20% of the world's tonnage and almost 60% of the European Union fleet. Our country is a reliable partner providing shipping services through a fleet of ships, including new acquisitions that implement state-of-the-art technologies.

Industry 4.0 utilises space technologies such as navigation/positioning, satellite communication, and earth observation. It is predicted that said applications will be enablers for the next generation of seafarers. It is also expected that in the coming years, a significant number of modern technologies and innovations will be applied to the designs of new merchant ships, completely changing the industry's outlook. Technologies such as automation and robotics systems, novel materials, secure and accurate navigation and shipping, and new communication capabilities will characterise new ship designs, products, and freight services worldwide. At the 1st Pytheas Maritime Space Forum, space-based technologies experts elaborated on the utilisation of such technologies in the shipping industry.

In my capacity as Secretary General of Telecommunications and Post, I oversee the country's civilian space engagement. Let me highlight some of its main elements.

Although Greece is often considered a newcomer in the space sector, this is not the case. Greece has been a founding member of the United Nations International Telecommunication Union since 1865 and has its own orbital positions and rights in space, which are managed under Greek national law by Hellas Sat 2, our national operator. The launch of Hellas Sat 2 in 2003 placed Greece among the so-called space-faring nations. With the launch of Hellas Sat 3 and 4, we saw new opportunities arising. As of 2019, these new satellites have provided the country with an operational Government Satellite Communications (Govsatcom) system named 'GreeCom', which connects ministries, parliament, embassies, civil protection authorities, etc. Through its Govsatcom, Greece is one of only six European countries that have their own system.

In the maritime sector, connectivity is essential; however, although satellite-based connectivity is available, terrestrial telecommunications networks are often unavailable. Our Ministry is working closely with all stakeholders, including the Ministry of Maritime Affairs and Insular Policy, to provide space-based connectivity. In addition, as announced by Minister Pierrakakis, the Ministry of Digital Governance is leading the development of a new national microsatellite system for secure space-based connectivity and earth observation to complement our Hellas Sat assets, responding to the national need with various policies on maritime, coast guard support, and island connectivity. We have recently connected several remote islands in the Greek territory via satellite with our national operator to ensure the safety and security of the country.

It is reminded that since 2017, Greece has had a specific Space Law regulating space activities licensing and that a National Registry of Space Objects has been established. In 2020, Greece's national policy objectives in the space domain were laid down in a new digital law, which includes the following:

1. strengthening national security and defence, primarily through the exploitation and development of space infrastructure,
2. developing the national space industry,
3. exploiting space data and developing related applications, and
4. supporting research and innovation in the field of space-based technologies.

Furthermore, Greece's Digital Transformation Strategy for 2020-2025 describes specific actions that the government will undertake in the space domain in the following years. Let me mention a couple of the activities we are currently working on.

I will begin with an update on the Govsatcom issue. As part of our plan's implementation, during the visit of Commissioner Thierry Breton to Greece, the Minister of Digital Governance Kyriakos Pierrakakis and the Minister of National Defense Nikolaos Panagiotopoulos offered to host in our country the European Govsatcom Hub, which will be based on pooling and sharing the current operating system's national capabilities. In the field of next-generation optical satellite communications, in 2020, the European Space Agency chose the Chelmos Observatory, the largest telescope in Central and Eastern Europe, as the first Optical Ground Station (OGS) of the ESA's ScyLight (Secure and Laser communication technology) programme. Chelmos will also be utilised under the European Union Quantum Communication Infrastructure (EuroQCI).

In 2021, two additional optical ground stations, Skinakas in Crete and Cholomondas in Thessaloniki, were also preparing to become part of the EuroQCI initiative. Last summer, I had the opportunity to witness the first time the Chelmos Observatory connected with the optical terminal of the Alphasat geostationary satellite.

Greece has hosted one of the Copernicus Collaborate Ground Segments at the National Observatory of Athens since 2014. This centre allows the access, utilisation, and management of specialised information provided by the EU Copernicus Programme. As indicated in the country's Digital Transformation Strategy, the centre will be further upgraded to be at the forefront of the Big Data era. Several presentations were made on this subject at the 1st Pytheas Maritime Space Forum.

Thus, today Greece has a comprehensive legal policy and strategy framework, which supports and governs space activities in Greece, coupled with specific programmatic activities. We are looking for complementarity and synergies between national, EU, and ESA programmes to maximise benefits for our country. With the motto "Space as an enabler of digital transformation" and a step-by-step approach, Greece is enhancing its capabilities and utilising and expanding its infrastructures, promoting a more efficient public sector and providing benefits to its citizens and businesses in the digital era. Maritime and Insular Policy is one of the sectorial areas that can benefit from this digital transformation.

We build on the assets of the country and the hard work and excellence of our industry, research institutes, and academia. Together, we will lead Greece to the new space era.

EUSPA'S ROLE IN SUPPORTING THE STRATEGIC INTERESTS OF THE EUROPEAN UNION

by **Rodrigo da Costa**,
Executive Director,EU Agency for the Space Programme

The safety of life at sea and protecting the oceans have always been a top priority for the maritime sector. The European Union Agency for the Space Programme (EUSPA) is developing space services tailored to the needs of this sector that deliver tangible benefits to end users.

To safeguard Europe's leading position in waterborne transportation, the European Commission is investing in digital technologies that ensure the safety of passengers and crew and minimise the environmental impact of maritime operations. Many of these new technologies rely on data and services generated by the EU Space Programme.

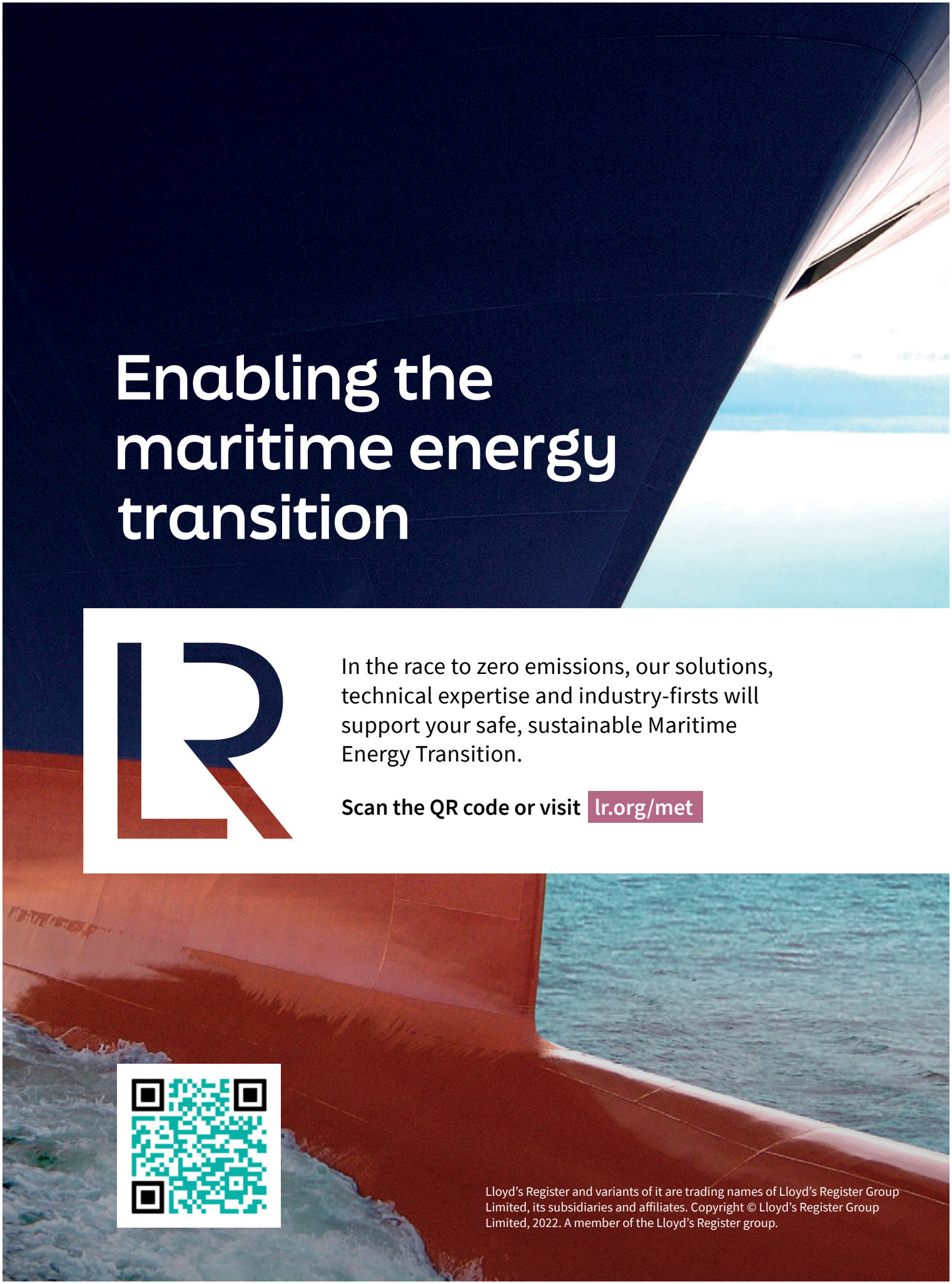
EUSPA is the user-oriented operational agency of the EU Space Programme, which contributes to the sustainable growth, security and safety of the European Union by enabling innovation, competitiveness and resilience. EUSPA designs and delivers safe and secure space-based navigation services. It also stimulates the market uptake of EU Space-based services by offering incentives and know-how to established companies, SMEs, start-ups, and innovators to utilise the services and data provided by the EU Space Programme components Galileo, EGNOS, and Copernicus. The launch of the Galileo constellation means a lot more than accurate navigation. The system was also set up to protect EU citizens through various services, one of them being the Galileo Search and Rescue (SAR) service, which announced in January 2020 a breakthrough feature: the Galileo Return Link Service (RLS). Thanks to Galileo RLS, sailors in distress equipped with the appropriate beacon will see a light indicating that their location has been established and the signal has been picked up by first responders. So far, Galileo is the only constellation to offer such a service to end users. The Galileo RLS increases survival rates by giving an important psychological boost to people in distress. Cospas-Sarsat experts have estimated that the international SAR system, with the contribution of the Galileo Search and Rescue service, saves more than 2,000 lives a year.

The European Union Agency for the Space Programme (EUSPA) has been entrusted with procuring the secure operational ground segment (GOVSATCOM Hubs), its operations, and the coordination of GOVSATCOM's user-related aspects, all in close collaboration with the Member States and other involved entities.

GOVSATCOM is designed to meet the unique requirements of governmental applications, including those used for crisis management, surveillance, and the management of key infrastructures. Further, to successfully execute their missions, governmental actors must have access to secure satellite communication services, which commercial satellite communication services cannot provide.

In conclusion, the European Union Agency for the Space Programme works closely with industry partners, user- communities, the European Commission, the European Space Agency, and, above all, the EU Member States. With its user-oriented approach, the EUSPA plays a pivotal role in supporting the strategic interests of the Union and maximising the benefits to European society and business.

To safeguard Europe's leading position in waterborne transportation, the European Commission is investing in digital technologies that ensure the safety of passengers and crew and minimise the environmental impact of maritime operations.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Through a seafarer's eyes

HORIZON FROM

by **Capt. Georgios Georgoulis**

REMOVING THE INDIAN OCEAN FROM THE "HIGH-RISK AREAS"

After more than a decade of effective threat-reducing counter-piracy operations, shipping has removed the Indian Ocean from the High-Risk Area (HRA) category. The Round Table of international shipping associations and the OCIMF, representing the global shipping and oil industry, announced the removal of the Indian Ocean from the HRA and issued new guidance to merchant ship operators.

On 17 August 2021, BIMCO, ICS, INTERCARGO, INTERTANKO, and OCIMF decided to reduce further the boundaries of the piracy HRA in the Indian Ocean as incidents in the region continue to decrease. In broad terms, the changes, which came into force on 1 September 2021, will reduce the HRA boundaries to the Yemeni and Somali Territorial Seas and Exclusive Economic Zones in its eastern and southern reaches. (Picture 1).

Picture 1: The Indian Ocean HRA
Source: Gard

The IMO was informed of the decision to remove the HRA as of 0001 UTC 1 January 2023 through a notification submitted on Monday, 22 August, for ratification by the next meeting of the Maritime Safety Committee scheduled to start on 31 October 2022.

The maritime organisations responsible for setting the HRAs emphasised that a serious threat remains, despite the reduction to the area's geographic boundaries and that correct reporting, vigilance, and adherence to the fifth edition of the best management practice (BMP5) remains crucial.

The removal of the HRA reflects the significant improvement in the piracy situation in the region, mainly due to the concerted counter-piracy efforts of many regional and international stakeholders. No piracy attacks against merchant ships have occurred off Somalia since 2018. In addition, the measures enacted to secure the waters through military, governments, civil society, and shipping industry interventions and the guidance provided by Best Management Practices have further reduced the threat of piracy in the Indian Ocean.

Best Management Practices 5 (BMP5) will continue to provide the necessary guidance to shipping to ensure threat and risk assessments are carried out on every voyage to mitigate the remaining risks and security threats in the region. The shipping industry will continue to monitor and advise on maritime security threats to assist the safe transit of vessels and seafarers who crew them. Pre-voyage threat and risk assessments should consider the latest maritime security information from organisations supporting the Voluntary Reporting Area (VRA).

The VRA has not changed. Ships entering the

THE BRIDGE

VRA are encouraged to register with the Maritime Security Centre for the Horn of Africa (MSCHOA) in accordance with industry BMP Best Management Practices (BMP). Therefore, carrying out threat and risk assessments and following best management practices is still necessary to mitigate the risks still present in this changeable, often complex, and potentially threatening environment.

BULK CARRIERS HATCH COVERS: INSPECTION, TESTS, & MAINTENANCE ENSURING A SAFE PASSAGE

Typically, water-sensitive cargoes like grain, steel, fertiliser, ores etc., are transported on dry cargo vessels. These vessels are equipped with hatch covers to allow swift intake and facilitate easy discharge of the above commodities.

A recent study and claims analysis by the Japan P&I club over the 5 years between 2016 and 2020 shows that out of the 161 claims reported, 76% involved wetting damage to grain, steel, and ore cargoes.

In 74 (or 46%) cases, the seawater damage was caused by leaking hatch covers, which shows hatch covers continue to generate seawater-induced claims and that improperly maintained and leaky hatch covers have a high claim potential. When water-susceptible cargo comes into contact with seawater during an ocean passage, it is most likely that a claim for wetting damage will be filed against the ship by the cargo owners/receivers.

If large amounts of water penetrate the ship's hatch covers, the ship and crew could be in danger, but limited water ingress would normally not cause a safety problem for the ship.

However, from a cargo quality point of view, even small amounts of water can ruin a part of the cargo and result in a claim against the ship. In general, Class and statutory rules and associated inspections will mainly look at the safety of the vessel and crew. The industry (charterers, shippers, receivers, underwriters) will take statutory and Class compliance for granted and focus more on the commercial aspects of carrying goods by sea.

There are two ways to detect a leaking hatch cover:

1. Water Hose Leak Detection Test: Water hose tests are used to determine the weather tightness of hatch covers. If correctly performed, hose testing will show hatch joints that leak. The general procedure for hose testing is to apply a powerful jet of water from a 20-50mm diameter hose fitted with a 12mm diameter nozzle held at 1-1.5 metres from a hatch joint, moving along the joint at a speed of 1 metre every 2 seconds.
2. Ultrasonic hatch leak detection: this is a viable alternative to the hose test for testing hatch covers, access doors and access hatches for weather tightness, as it accurately locates potential leakage points. This test should only be carried out using Class Type approved equipment such as Cygnus Hatch Sure and approved test procedures. The test should only be carried out using Class approved equipment and approved test procedures. It involves placing an electronic signal generator inside the cargo hold with closed and secured hatches. A sensor is then passed around the outside of all compression joints. Readings taken by the sensor indicate points of low compression or potential leakage points.

A few decades ago, only a few types of hatch covers were made, but today there is a wide variety of hatch covers are available to accommodate the requirements of specific ships, trades, and cargoes. Nowadays, the most common types of hatch covers for general cargo ships, Handysize, Panamax, and Capesize bulk carriers are folding hatch covers (general cargo & Handysize) and side rolling hatch covers (Panamax & Capesize). For container vessels, we generally see lift-away type pontoons installed.

Ultimately, the shipowner, in concertation with the shipyard, classification society, flag administration, and charterers, will be the one who decides which hatch cover type is more suited to the potential charterers' business model best. Eventually, hatch covers that are right for the ship, trade and cargo will be developed around specific key parameters. Items that may influence the design are the size of hatches are, among others, the size of the hatches, carriage of deck cargoes, strength requirements, available crew for preparing hatches to go to sea, and opening/closing methods.

Hatch cover designs have evolved from very basic and relatively lightweight designs to huge, heavy, and moving pieces of equipment. Hatch covers are considered heavy-duty shipboard equipment due to their material, which can withstand rough handling and does not need constant care and maintenance. In fact, modern hatch covers are high-tech equipment whose very small tolerances should be observed. Their maintenance is type-specific, and their operation should be considered a risk. Therefore, it is essential to understand how hatch covers work and how to maintain and operate them.

Cargo should not only be carried and delivered in time and good condition but should also be transported in an environmentally friendly manner. Given the size and weight of hatch covers and that many types are still operated by hydraulic systems, they have a polluting potential in the event of failure and associated spillage.

When carrying out an inspection, look for physical damage:

- Significant corrosion, cracks, and distortion in covers and coamings; these should be well painted and free of such damage
- Holes and permanent distortion in the plating
- Distortion in beams or stiffness on the underside of the top plate
- Corrosion around welded connections of beams or stiffeners
- Cracking of connecting joints and welds
- Hatch movement; this should be smooth. If violent movement is observed, investigate and remove the cause.
- Hydraulic system leakage

The following precautions should be taken in rough or heavy weather, when high swells are expected, or when it is likely that water will be shipped on deck.

Prior to Rough Weather

- Check that hatch cleats are properly secured and adjusted. In rough weather, hulls are subjected to high racking forces, so hatch covers must be held in place but allowed to flex.
- As a precaution, briefly pressurise the hydraulic system to ensure that it is fully charged and that the piping is filled with oil. This has two benefits; first, it prevents seawater from entering loose couplings or seals, and secondly, it eliminates any creep which may have occurred.

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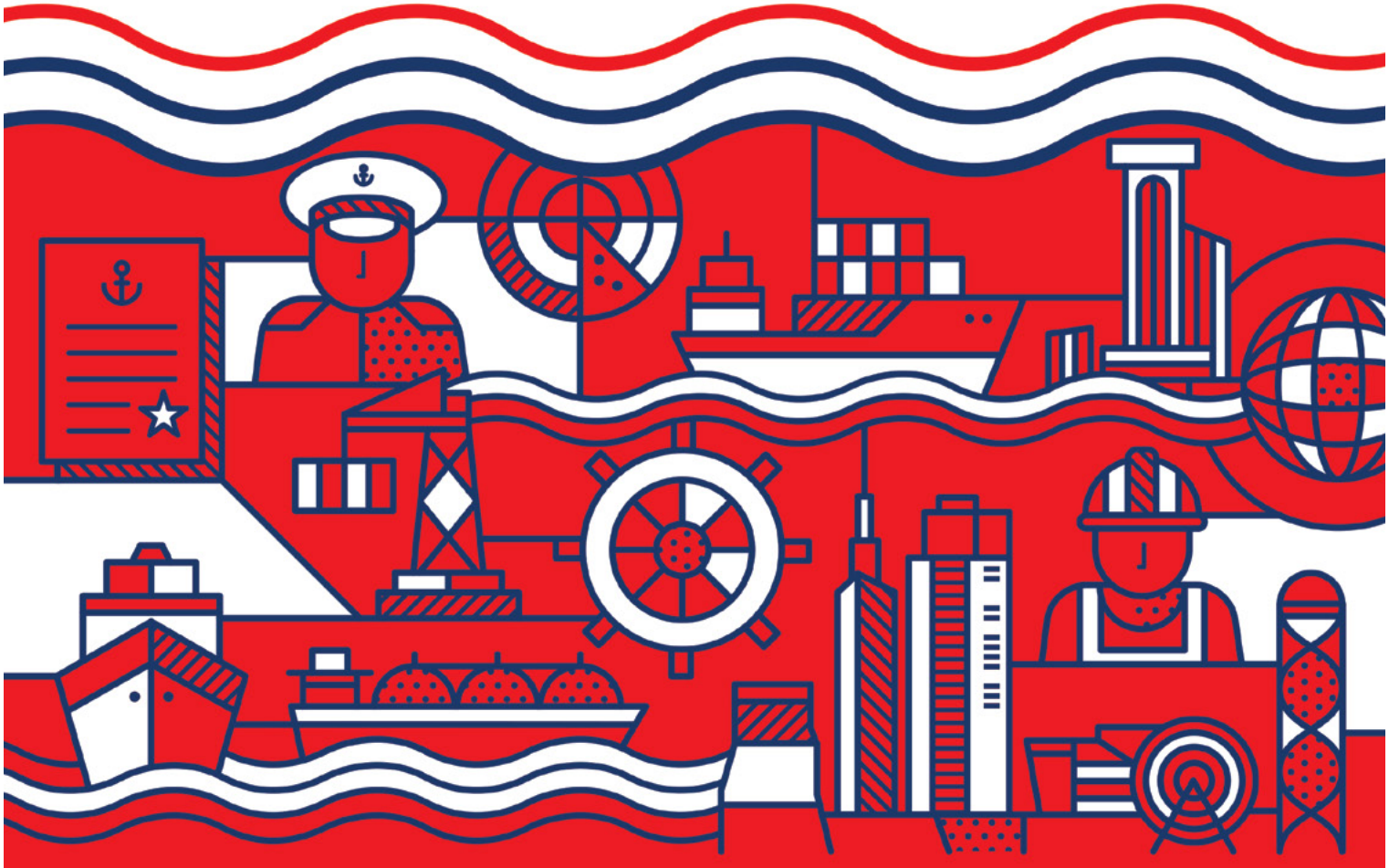

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After Rough Weather

- Inspect all cleats, guides, and hydraulic components for damage. If hydraulic components have been damaged, do not attempt to open the covers. The emergency opening procedure should be followed until the hydraulic components have been checked and tested.
- Check hatch covers for buckling or distortion.
- When opening the hatch covers, check for uneven movement and any unusual noises that may indicate damage.
- Check all grease points and re-grease.

The avoidance and prevention of injuries are of paramount importance. Before working on a hatch, a risk assessment should be completed to identify all hazards. Control and safety procedures should be examined and modified to minimise hazards.

Only the combination of proper inspection, correct and safe operation and regular maintenance of hatch covers will ensure that the goods loaded onboard ships can be transported in line with best industry practices.

ALLIANZ SAFETY AND SHIPPING REVIEW 2022

The international shipping industry carries around 90% of world trade, so vessel safety is critical. During the early 1990s, the global fleet was losing 200+ vessels a year. Over the past four years, these losses have dropped to around 50 to 75 a year— a statistic made more impressive by the fact that the global fleet today comprises an estimated 130,000 ships (exceeding 100 gross tonnage) compared to some 80,000 30 years ago.

The sector continued its long-term positive safety trend in 2021 with 54 reported total losses compared to 65 a year earlier. Over the past decade, annual shipping losses have declined by 57% (127 ships), while 2021 represents a significant improvement on the rolling 10-year loss average (89), reflecting the increased focus on safety measures over time, such as regulation, improved ship design and technology and risk management advances.

South China, Indochina, Indonesia, and the Philippines are the main global loss hotspot, accounting for one in-five losses (12), although activity has declined year on year. The Arabian Gulf (9) saw a significant increase in loss activity and ranks second, ahead of the East Mediterranean and the Black Sea regions, which rank third (7). South East Asian waters have also been a major loss location in the past decade (225 out of 892), driven by factors such as high levels of local and international trade, congested ports, older fleets and extreme weather.

Cargo vessels accounted for half of all vessels lost in 2021 (27). Foundering (sinking) was the leading cause of all losses across all vessel types during 2021, accounting for around 60% (or 32 vessels). Fire/explosion ranked second (15%/8), with machinery damage/failure third (11%/6). Extreme weather was reported as being a factor in at least 13 losses during 2021, while December and May were the most frequent months for losses, with seven each.

Collectively, foundering (52%), getting wrecked/stranded (grounded) (18%), and fire/explosion (13%) were the top three causes of total losses over the past decade, accounting for more than 80% of the 892 reported losses.

While total losses declined over the past year, the number of reported shipping casualties or incidents increased. The British Isles saw the highest number of reported incidents (668 out of 3,000). Machinery damage/failure accounted for over one-in-three incidents globally (1,311). Fire/explosion (178) is the third top cause, after collision (222), with the number of fires increasing by almost 10% annually.

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LIBERIAN REGISTRY

The East Mediterranean and the Black Sea region account for most shipping incidents over the past decade (18% or 4,763 incidents). Globally, most incidents have been caused by machinery damage or failure (9,968), followed by collision (3,134), contact (2,029), piracy (1,995) and fire/explosion (1,747).

Finally, while total ship losses have dramatically improved over the last decade, the problem with the loss of large container ships (X-Press Pearl) and car carrier ships (Felicity Ace) due to fire remains a major headache for those involved in shipping, especially insurers. Although there is no reliable solution to the problem, several prototype fire prevention and fighting systems are being tested, and we are awaiting the results of these evaluations.

MLC AMENDMENTS 2022

We have been reading about many cases of vessels being detained and banned from countries due to MLC breaches. One such example is the Liberian-flagged oil tanker, AG Neptune. On 17 June 2022, the Australian Maritime Safety Authority (AMSA) banned the vessel from entering Australian ports for six months after receiving a complaint regarding the underpayment of seafarers and other welfare issues.

During the inspection, the AMSA found evidence that the seafarers' employment agreement had not been met, the food and drinking water were not of appropriate quality, quantity, and nutritional value, and seafarers were not provided with adequate medical care after being injured onboard.

During Part II of the fourth meeting of the Special Tripartite Committee (STC) of the Maritime Labour Convention, 2006 (MLC, 2006) held from 5 to 13 May 2022, amendments to MLC 2006 and resolutions were adopted, entering into force by December 2024. Seafarers won significant concessions during the negotiations on the amendments to the MLC 2006 related to connectivity, food, and personal protective equipment.

The New MLC Amendments were adopted to ensure that:

- Seafarers will have the appropriate personal protective equipment (PPE) to prevent occupational accidents, injuries, and diseases on board;
- Appropriate measures will be in place to prevent or reduce the risk of exposure to harmful levels of ambient factors and chemicals and minimise the risk of injury or illness that may arise from the use of equipment and machinery on board ships
- Food and drinking water supplies will be: adequate in quantity, nutritional value, quality, and variety, sufficient for the number of seafarers on board and the duration and nature of the voyage; appropriate for their religious requirements and cultural practices concerning food; provided free of charge during the period of their employment onboard.
- States will further facilitate the prompt repatriation of abandoned seafarers.
- States will provide medical care to seafarers needing immediate assistance and facilitate the repatriation of the remains of seafarers who have died on board. Seafarers will be informed of their rights relating to the obligation of recruitment and placement services to compensate seafarers for monetary losses.
- All deaths of seafarers will be recorded and reported annually to the ILO, and the relevant data will be published.
- Seafarers will be informed of their rights regarding the obligation of recruitment and placement services to compensate seafarers for monetary losses.

The adopted amendments will be implemented by the Flag States. Therefore, Companies should seek information from their respective flag State(s) to update their existing Safety Management System procedures.

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SHIPPING & ENTREPRENEURSHIP

QATAR'S MASSIVE LNG CARRIER SHIPBUILDING PROGRAM IS PROGRESSING

Qatari giant QatarEnergy recently signed deals with an Asian consortium for the time charter of seven LNG carriers.

The consortium, which consists of NYK, "K" Line, MISC Berhad, and China LNG Shipping (Holdings) Limited, has entered into a contract to build the seven vessels, with a carrying capacity of 174,000 cubic meters, with Hyundai Heavy Industries Co. Ltd.

The 299-metre-long vessels will be delivered between 2025 and 2026. It is reminded that in March 2021, QatarEnergy launched an international tender process to shipowners for the charter and construction of more than 100 LNG carriers, which will serve Qatar's ambitious plans to increase LNG production capacity.

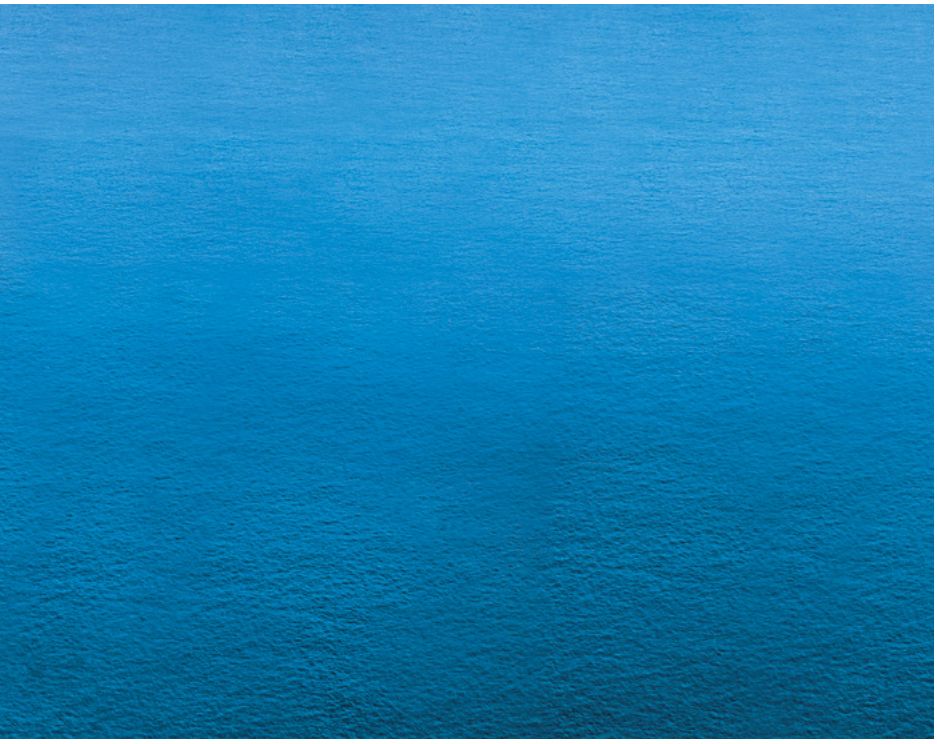
Last April, state-run QatarEnergy signed charter deals with a MOL subsidiary for the long-term charter and construction of four LNG carriers, marking the first such charters under QatarEnergy's shipbuilding program.

DP WORLD PREPARES FOR ASIAN EXPANSION

DP World has set its sights on Asian supply chains with a new investment in Belawan Port in the Straits of Malacca. More specifically, a new joint venture between Dubai-based DP World and Indonesia's sovereign wealth fund, in collaboration with Pelindo, Indonesia's state port operator, will invest in developing the Belawan port infrastructure.

The $7.5 billion investment in Belawan Port, located in Sumatra, aims to transform the port by increasing its terminal capacity and connectivity with other large ports.

The port's handling capacity is expected to increase to 1.4 million TEUs in the next six years, which is expected to significantly strengthen the



port's position in the Straits of Malacca as a vital artery of global maritime trade.

A.P. MOLLER-MAERSK DIVESTS ITS SHARE IN GLOBAL PORTS

A.P. Moller-Maersk's terminals business, APM Terminals (APMT), has entered into an agreement to divest its 30.75% shareholding in Global Ports Investments PLC (GPI) to long-standing partner Delo Group.

Following the announcement of Maersk's commitment to discontinue activities in Russia earlier this year, APMT has now entered into a binding agreement, subject to regulatory approvals, to divest its entire 30.75% shareholding in GPI to APMT's long-standing joint venture partner Delo Group who also owns 30.75% of the shares in GPI. The transaction has been undertaken on an arm's length basis and includes an ability for APMT to re-enter the partnership with Delo in the future. With the divestment of its shares in GPI, APMT will no longer be involved in any entities operating in Russia or own any assets in the country. The transfer of share ownership takes place after regulatory approvals have been obtained.

SCRUBBERS MARKET EXPECTED TO SOAR AHEAD OF 2030

In the race to reduce emissions from shipping industry activities, scrubbers are proving to be a reliable ally. A recent Acumen, Research and Consulting report notes that the medium-term future of the marine scrubber market looks bright, as estimates for 2030 are talking about a market size of $16.4 billion.

According to the report, the size of the scrubbers market in 2021 was approximately $3.6 billion, and it is expected to climb to $16.4 billion by 2030. Although the total of scrubbers produced is not only used on merchant ships, the report indicates that merchant shipping will absorb a significant share between 2022 and 2030.

In addition, due to stringent environmental regulations, Europe is expected to remain a significant player in the market. In terms of growth, the wider Asia-Pacific region is estimated to be the fastest growing by 2030.

The report also notes that the need for scrubbers is driven by environmental concerns. Other drivers are the potential effects of emissions on the health of seafarers and the rise in demand for bulk carriers and oil/chemical tankers.

Nevertheless, certain factors, such as high installation and maintenance costs and the strong possibility of equipment oxidation, hinder the widespread adoption of scrubbers.

RUSSIA INVESTS IN FAR EASTERN BASIN PORTS

Russia is looking to invest in increasing the management capacity of its Far Eastern Basin ports. According to a report by the Russian news agency TASS, fifteen expansion projects are expected to increase cargo turnover by 117 million tons.

This move by Moscow seems to be linked to its commercial ambitions in the wider Asia-Pacific region. The Deputy Minister of Transport of Russia, Dmitry Zverev, said "To expand the freight turnover with countries of the Asia-Pacific Region, we are expanding our Far Eastern Basin

ports. Fifteen projects, which will incrementally increase our ports' throughput capacity by 117 million tons currently at the design and construction stage - in addition to the existing port capacity of 300 mln tonnes per year".

BLUE ECONOMY

UK'S FIRST 100% CARBON NEUTRAL PORT

The Port of Heysham, part of leading port operator Peel Ports Group, has reduced the carbon emissions of its landside plant, equipment and vehicles by up to 90%, in what is believed to be a first for any UK port.

The port has confirmed that all its vehicles, plant equipment, forklift trucks, tug masters and ancillary equipment are now operating on electricity or Hydrotreated Vegetable Oil (HVO).

Whilst using 100% renewable electricity is the ultimate goal for the port operator, HVO uses plant-based oils in its composition, which reduces CO2 emissions to the atmosphere by up to 90%, and direct emissions of particulate matter, such as dust, smoke and other fine materials, by up to 65%. HVO can be substituted directly for diesel fuel and is broadly considered a greener option than diesel due to its lower NOx emissions.

Due to its location in northwest England and proximity to major industrial clusters, Heysham provides a critical and direct gateway to the Republic of Ireland, Northern Ireland, and the Isle of Man.

The Port of Heysham handles a wide range of cargo, including Roll-on Roll-off, agri-bulks, automotive, project cargo and energy products, and offers significant warehousing and storage facilities.

EMSA DRONE OPERATING IN THE STRAIT OF GIBRALTAR AREA FOR MULTIPURPOSE MARITIME SURVEILLANCE

EMSA's remotely piloted aircraft is in operation in the vicinity of the Strait of Gibraltar, providing the Spanish Ministry of Transport, Mobility and Urban Agenda with the capacity to monitor sulphur and nitrogen emissions of passing ships. The initiative builds on the experience gained during a similar operation which saw the aircraft's special sniffer capabilities for emissions monitoring. While the Merchant Marine can use the measurements taken to check the passing ships' pollutant compliance, the flights can also be directed to support the Spanish Maritime Safety Agency (SASEMAR) for search and rescue.

Spanish and international waters around the Strait of Gibraltar are again being monitored to check air pollution levels from nitrogen oxide and sulphur oxide emissions released by passing ships. The pollutant data gathered actively supports the monitoring of compliance with existing regulations and, in doing so, can help to reduce the harmful effects on human health and the environment.

Emissions monitoring is one among the several purposes for which the aircraft can be deployed within the area of operation; other complementary tasks include pollution detection, suppression of trafficking and smuggling operations, fisheries control, and vessel traffic management.

The Remotely Piloted Aircraft System (RPAS) used is a Camcopter S100 uncrewed helicopter, which is operated by EMSA's contractor, Nordic Unmanned. The RPAS is equipped with an emissions sensor from the contractor Explicit. This analyses the gas samples taken as the RPAS flies through the exhaust plume of the ship's funnel or stack. Calculations are then made to determine sulphur and nitrogen levels. Indications of non-compliance can trigger an inspection at the next port of call to determine whether an infringement has occurred.

This is the second emissions monitoring campaign to take place in the area, chosen for its proximity to busy shipping lanes, within the flight range of the aircraft, and the expertise of the personnel monitoring maritime traffic in the area.

Emissions surveillance operations such as these will reinforce the recent approval of the Mediterranean Sea as an Emission Control Area by the International Maritime Organization, which is expected to come into force in 2025.

THE IMPORTANCE OF THE RHINE IN THE WORLD ECONOMY

Plummeting water levels in Germany's Rhine River have been causing significant headaches in European supply chains. The drop in water levels at the river's key points has led to reduced shipping traffic and a reduction in the permitted weight carried per ship, significantly affecting Germany's energy supply chain.

6,900 river barges transport critical commodities such as coal, steel, chemicals, fuel, and grain across the Rhine. In 2020, an estimated 160 million tons of goods were shipped along this river. The Rhine's criticality for Germany's energy security is crucial as the river transports coal to the country's power plants.

At the same time, the Rhine is also used to transport oil and diesel from the Amsterdam-Rotterdam-Antwerp (ARA) ports to Germany and Switzerland. The disruption of inland waterway oil transport puts 400,000 barrels/day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of oil trade at risk.
In 1990 and 2018, the level of the Rhine at the Kaub point had also reached dangerously low levels. However, in both cases this happened at the end of October. So, freight flows through the river may also face challenges in the coming months.

THESSALONIKI TRANSFORMED INTO A COMBINED TRANSPORT HUB

Thessaloniki Port Authority SA (ThPA) launched a new regular service with block trains between Thessaloniki and Niš, Serbia. The first block-train carrying containers from CMA CGM SA, a French container transport company pioneering in the shipping and logistics sector, departed from the Container Terminal of ThPA S.A. on the morning of Wednesday, 17 August and arrived at the Mbox terminal in Niš on the same day at a transit time of just 16 hours.
The service was made possible due to the cooperation between ThPA S.A. and the Greek-Northern Macedonia-Serbia railway companies, namely Hellenic Train SA, MZ Transport A.D., Kombinovani Prevoz D.O.O. respectively and 9 other private and public entities.
The Executive Chairman of the BoD & Managing Director of ThPA S.A., Thanos Liagkos, stated that "ThPA S.A. is consistently implementing its development strategy and investment plan with emphasis on upgrading the infrastructure and equipment of the Port while improving the rail connection of the Port of Thessaloniki with the bordering countries ".
From September 2022, trains will depart from both Thessaloniki and Niš every week on Wednesdays and Saturdays, arriving on the same day at their respective destinations. ThPA S.A. is ready to increase the frequency of the services, accommodating our partners' demands in the dynamically growing Serbia.

GEOPOLITICS

GREECE – SAUDI ARABIA STRENGTHEN RELATIONS

At the end of July, Greek Prime Minister Kyriakos Mitsotakis met with the Crown Prince of Saudi Arabia, Mohammed bin Salman bin Abdulaziz Al Saud at the Maximos Mansion during his first official visit to Greece.
The meeting took place in a positive atmosphere, indicative of the strong interest of both sides in the further deepening of close bilateral relations

and the expansion of the dynamically developing Greek-Saudi cooperation, which was also confirmed during the visit of Kyriakos Mitsotakis to Riyadh on October 2021.

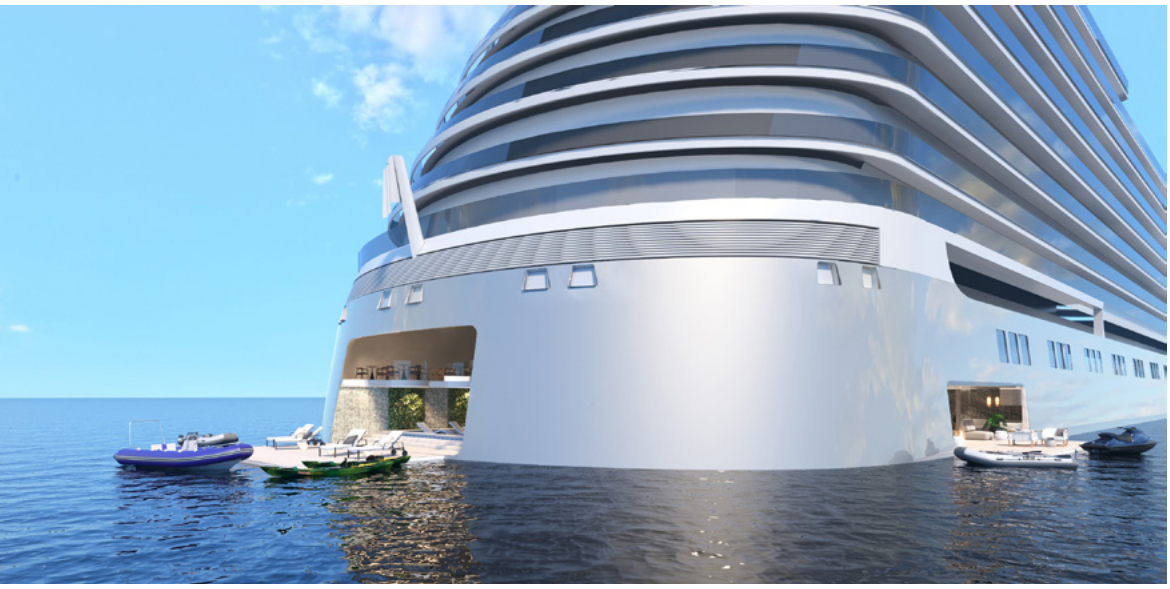
Kyriakos Mitsotakis underlined the importance of the East to Med data Corridor (ECM) project. This undersea and terrestrial data transmission cable system will connect Europe with Asia via Greece and Saudi Arabia and make Greece the EU's eastern gateway for the transfer of data input while simultaneously connecting Greece to the Middle East and Asia

He also had the opportunity to present to the Saudi Crown Prince the initiatives Greece has been undertaking to become an energy hub connecting the broader region with European markets. In this context, the two leaders discussed the prospects of cooperation between the two countries in the field of "green energy" and the possibility of transferring electricity from Saudi Arabia to Europe via Greece, which can become the "bridge" between the Middle East and Europe.

Kyriakos Mitsotakis pointed out to the Crown Prince of Saudi Arabia the new investment opportunities that Greece offers in tourism infrastructure, the real estate market, maritime transport, and the logistics sector while stressing the significant investment opportunities in port infrastructure and the land transport network in Alexandroupolis. The two leaders also focused on the new prospects for cooperation in digital connectivity, which can transform the two countries into important regional data centres due to their geographical location.

During the visit of the Crown Prince of Saudi Arabia, a high-level Greece-Saudi Arabia business forum also took place.

In the context of the forum, in the presence of the Investment Ministers of the two countries, Adonis Georgiadis and Khalid bin Abdulaziz Al-Falih, sixteen business agreements and MoUs between Greek and Saudi business groups and companies were signed in the fields of energy, maritime and air transport, aquaculture, waste management, culture, food and agricultural products, construction, and defence technology. On the Greek side, agreements were signed by the following companies/groups: Aegean, Mytilineos S.A., Dynacom Tankers Management Ltd, Sea Traders SA, Hellenic Environmental Center SA, Theon Sensors SA, RAYCAP, Greek Energy & Infrastructure Investment Corporation (GrEC Fund), Holroyd Holdings Ltd, Southpoint Maritime SA, Chr. Stamatiou & Sons SA, Highway



Special Construction Systems SA, and Corinth Pipeworks Pipe Industry SA.

JAPAN PLEDGES $30 BILLION INVESTMENT IN AFRICA AMID CHINA'S RISING INFLUENCE

Speaking virtually to a conference in Tunisia focused on Japanese investment in Africa's development, Japanese Prime Minister Fumio Kishida announced $30 billion in investments over three years in an apparent effort to counter China's rising influence on the continent.

"Japan aspires to be a partner growing together with Africa. Japan contributes strongly to the development of Africa by overcoming challenges in Africa together with Africa. By doing so, Japan learns and grows too. Japan, as a partner, takes an approach which focuses on people. I have explained these ideas and received support from many African leaders. This also embodies the concept of the new form of capitalism that I have proposed," said the Japanese Prime Minister.

The US$30 billion as the sum of public and private financial contributions focuses on investment in people and quality of growth and aims for a resilient and sustainable Africa while solving various problems faced by the African people.

Kishida also spoke of the need to protect the rules-based international order after Russia invaded Ukraine.

TENSION IN US-SOLOMON ISLANDS RELATIONS

The Solomon Islands authorities have suspended entry into the island country' s waters by foreign navy ships pending the adoption of a new process for approval of port visits to better police its exclusive economic zones.

The suspension of entry was imposed following an incident in which a US Coast Guard vessel, the Oliver Henry, could not make a port call because Solomon Islands authorities did not respond to its request for refuelling.

"We have asked our partners to give us time to review and put in place a new procedure before sending further requests for military vessels to enter the country," Prime Minister Sogavare said in a statement.

Earlier, the American embassy in Canberra had announced that the Solomon Islands government had informed the US that it was imposing a moratorium on the arrival of US warships in its ports.

"On 29 August, the US received official notification from the Solomon Islands government that a moratorium was imposed on all Navy visits, pending the renewal of procedural protocols," the US embassy said.

Relations between the Solomon Islands and the US have been strained due to the Solomon Islands-China security deal in April.

A State Department spokesperson said the refusal of berthing clearance to the Oliver Henry was "regrettable".

PASSENGER SHIPPING

THE MAPPING OF GREEK COASTAL SHIPPING

XRTC Business Consultants has published its 21st annual in-depth study on Greek Shipping entitled "Greek Coastal Shipping 2022: A new cycle of growth and opportunities". The study focuses on the prospects and challenges of Greek passenger shipping.

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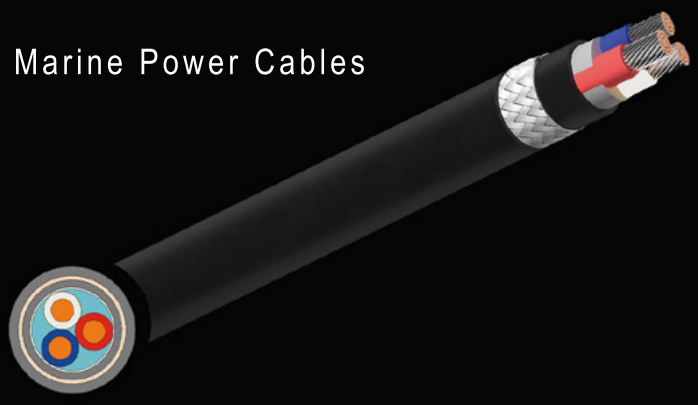
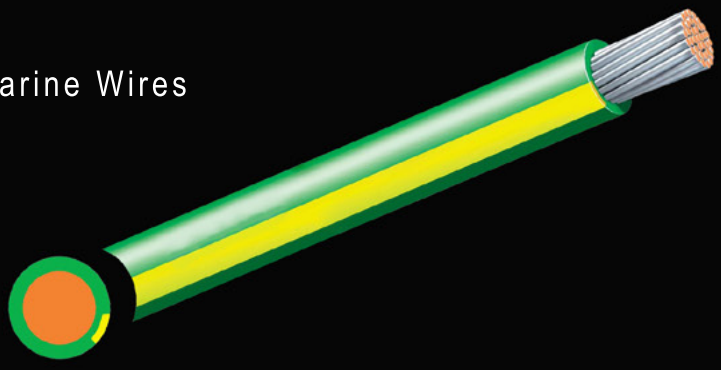


Marine Wires



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Fuel

Recent data on the coastal shipping industry is extremely worrying, as it shows that after the 32.4% increase in the average price of marine fuel in 2021 compared to 2020 prices, the fuel price increased further by an average of 28% in February this year compared to December 2021. This trend was maintained through the first weeks of March.

The price of VLSFO is still hovering above €1,000 per tonne when in the same period in 2021, it was around €400.

Before the pandemic and the Ukrainian war, fuel costs comprised about 30-35% of ships' operating costs. With fuel price increases in the fourth quarter of 2021 and the first half of 2022 more than double compared to the to the same period in the previous period, fuel costs have soared to 60-70% of ships' operating costs.

Tourist traffic

In 2021, inbound tourist traffic doubled compared to 2020, the year with the lowest number of tourists in the last decade (7.4 million). Even though 14.7 million tourists visited our country in 2021, this number is far from the high of 31 million tourists in 2019.

In its recently published report, the Bank of Greece predicts that in 2022 Greek tourism performance will improve more, aiming for 2019 levels. However, the current health crisis, combined with the increased uncertainty caused by the Russian invasion of Ukraine, rising energy costs in recent months, and reduced household purchasing power, act as barriers to the tourism industry's recovery.

A coastal market snapshot

This summer, 100 coastal ships served daily 115 Greek islands connecting them with the mainland or providing inter-island connections.

Demand Analysis

The development of Greek islands relies exclusively on coastal shipping. Of the above 115 islands, only 25 have an airport; therefore, transport in the remaining 90 is carried out only by sea. Overall, 85% of the freight and all the supply needs of these 115 islands are covered by coastal vessels.

The statistics published by the Hellenic Statistical Authority (ELSTAT) confirm the increase in passenger and vehicle traffic in 2021 compared to 2020. In 2021, passengers increased by 44%, while total vehicles (cars and trucks) went up by 37%. It is noted that ELSTAT has not published separate data for cars and trucks.

'MV NARRATIVE' REVOLUTIONISES CRUISING

A new American-European collaboration is seeking to revolutionalise the cruise market. American Storylines announced an agreement with the Croatian Brodosplit shipyard to construct an ultra-luxury cruise ship, whose value is expected to reach $1.5 billion.

The cruise ship, dubbed MV Narrative, will have room for 547 residences that will be up for sale, and the two companies believe it will be the first of its kind to be powered by liquid natural gas propulsion. In fact, in their recent press release, they stated that this cruise ship would be the market's most eco-friendly vessel.

The apartments for sale on the ultra-luxury cruise ship range from a 237-square-foot studio to a 2,411 square-foot four-bedroom home., with process ranging between $300,000 and $8 million. It is worth noting that there will be the possibility to rent the residences through a special Storylines rental program.

In addition, the cruise ship will feature a waterfront marina (aft, lower level) that will give access to personal watercraft, a microbrewery, an art gallery, and a hydroponic garden farm.

Storylines founder Shannon Lee stated that the partnership with Brodosplit allows Storylines to meet its environmental goals, as the yard specialises in the construction of LNG -powered vessels, which shows the strong position of the European shipbuilding industry in the cruise market.

SEA CRUISE IN THE PORT OF AMSTERDAM CONNECTED TO SHIP-TO-SHORE POWER

The Port of Amsterdam is working towards the energy transition by making sea cruises more sustainable. In 2025, sea cruises will be connected to ship-to-shore power at the Passenger Terminal Amsterdam (PTA).

This will reduce emissions from a cruise ship at the quay and improve the air quality in the surroundings. From 2030, it will be a legal requirement for sea cruises to use ship-to-shore power. The Port of Amsterdam wants to be a leader in the energy transition. That is why it is speeding up the installation of green ship-to-shore power for both sea and river cruises. Thanks to ship-to-shore power, the berths at the PTA will become greener, significantly reducing the CO_2 emissions of sea cruise ships at the quay and improving air quality by reducing particulate matter, among other things. Since these ships will no longer need to use their generators, ship-to-shore power will also help reduce odour and noise.

The PANAMA Ship Registry has grown by 9.6% in tonnage, adding 20.4M GT between July 2019 and July 2022. It now has a total of 239.4M GT in tonnage capacity. According to IHS Markit, in July 2022, the Panamanian fleet comprised 8,587 vessels.

PANAMA

General Consulate of Panama in Greece

PANAMA MARITIME AUTHORITY

Information submitted by:
Panama Maritime Authority

According to Panama Maritime Authority (AMP) statistics, this year alone, the flag had grown by 1.39% (or 3.9M GT) and recorded 27% fleet retention by the end of July, representing a significant improvement on the 10% retention rate at end-2021. During the same period, it also recorded a 9.3% decrease in cancellations due to a shipowner or operating company's decision to transfer vessels to other registries. Clarksons Research data shows that in July 2019, when the new AMP administration had taken over, the Panama Ship Registry was showing negative growth (-2.7%), which required an immediate change of strategy as the figures were very discouraging. But by May 2020, almost a year later, the Registry booked positive figures, finishing the year with 3.9% growth and a 10.4M GT increase in tonnage.

The new administration has been analysing the global shipping industry and monitoring the statistics of the Panama Registry and its competitors.

International competitiveness, the dynamic and changing nature of the global shipping sector and businesses in the State of Panama related to the Panamanian Ship Registry require a national strategy based on clear and transparent legislation that contributes to the sustainable development of its operations.

The Ship Registry (under the Directorate General of Merchant Marine) has established a series of performance indicators to measure its productivity and the efficiency and quality of its operational processes and services. Since 2020, the net GT growth goal has been achieved by 68%, while the goals of gross growth in ship numbers and gross growth in GT have been fully met.

The AMP has prioritised the revision and update of Law 57, one of the legal frameworks on which the administration of the Panamanian fleet is based. This process began in 2020 and continues in consultation with the Panama Maritime Law Association (PMLA-APADEMAR). Law 57 was part of a strategy aimed at maintaining the leading position held by Panamanian shipping since 1993 and increasing its competitiveness.

In addition to working on the General Law on the Merchant Marine revision and changes, the AMP, together with the General Directorate of Merchant Marine, the General Directorate of Seafarers, and the General Directorate of the Public Registry of Ship Ownership has been working on increasing the competitiveness of the Panamanian flag.

The above actions reflect the administration's faithful implementation of the national strategy based on four fundamental pillars: process reengineering, technological innovation, international compliance, and improvement of customer-oriented services.

They have improved fleet compliance by purging the Panama Ship Registry of non-compliant ships, exer-

(*) Special acknowledgements to H.E. Julie Lymberopulos, Ambassador and General Consul of Panama in Greece, for her contribution and coordinating with the Panama Maritime for their replies in the questions of Naftika Chronika

STEADILY GROWING

cising due diligence in aligning with environmental and international transparency standards, promoting the Registry through specialised media, investing in technology, and searching for new benefits and incentives for clients are also part of this strategy's implementation.

Becoming internationally competitive remains high on the agenda of Panama's merchantmarine. To this end the Republic of Panama and the government of the People's Republic of China have renewed their Agreement on Maritime Transportation, which offers significant advantages to Panama-flagged vessels. A Business Intelligence Department has also been established to strengthen the understanding between the two countries shipping businesses.

The Registry's strategy includes a complete revision and update of its standards within 2022 to comply with international market standards.

In addition to the reengineering and reorientation of the Registry, the strategy is contemplating, among other things, an aggressive and broad international marketing plan that includes creating new departments, reassigning functions to existing departments or sections, and adopting new technologies.

At the same time, the Directorate General of Merchant Marine has introduced measures το strengthen the flag inspection program, particularly on vessels calling at US ports eligible for a US Coast Guard's Port State Inspection (PSC), and improve the control and compliance rate of the Panama Ship Registry fleet.

These measures will encourage and promote a better maritime industry by ensuring compliance with safety, security, and environmental standards. In addition, the Registry is increasing the monitoring of vessels with deficiencies and detentions through regional Port State Control regimes.

The AMP has also reinforced the following mechanisms to improve fleet performance in the different regions supervised by Port State authorities participating in Inspections MoUs:

- The Directorate General of Merchant Marine Resolution No.106-183 of August 03, 2020, enacted measures for the detection and action against vessels detained multiple times to improve their condition and performance and mitigate the recurrence of detentions. It also ratified sanctions against Recognised Organisations (ROs) or ships that commit serious errors that negatively impact the Panamanian Registry's image.
- A flag inspection mechanism for vessels arriving at US ports based on risk factors.
- A pre-arrival checklist for Australian ports to assist ship owners, operators, technical managers, designated persons ashore (DPA), and vessel masters in detecting weak points that may result in detention through a Port State Control Inspection by the Australian Maritime Safety Authority.
- An annual flag safety inspection for priority 1 vessels arriving at any port in Italy, in line with the Paris MOU inspection and screening scheme for vessels.
- A flag safety inspection for vessels operating in the Paris MoU ports: the above resolution specifies that all Panama-flagged vessels over 20 years of age arriving at any port of the signatory countries of Paris MoU will be subject to a flag safety inspection (ASI) every six (6) months.

Currently, the Panamanian fleet performance is at 96%. Still, it is expected to improve further by implementing the above actions that will reduce detentions and optimise the Registry's performance in the various MoUs to which Panama is a party.

WE TRY TO BE MORE

One of Greece's longest-standing and acclaimed ship supply companies has heavily invested in innovative projects and state of the art equipment providing the best solutions to its customers. Mr Manos Vassilopoulos talks about this competitive sector and the company's growth plans.

An interview with **Manos Vassilopoulos**, COO/Vice President of VANOS S.A.

How has the role of a ship supplier changed/evolved over the past years?
Over the past few years, technological evolution and global fleet renewal have undoubtedly brought about changes in ship supplies demand. This change has been characterised by the need for advanced technologies focused on safety and environmental sustainability related to shipping companies' certifications or the requested product specifications.
The traditional ship supplier model does not suffice to address this new need, so ship suppliers should focus on offering comprehensive technological solutions. What differentiates a ship supply company from others is its deeper knowledge of products and services, which includes having technical expertise, identifying customer needs, and providing after-sales support.
At Vanos S.A., we try to be more than just a supplier. Our mission is to act as the shipping company's partner who tries to identify specific, fully personalised solutions for any situation by applying a full range of products and services. It is important to emphasise that our certifications, combined with the critical factors mentioned above, are our most significant credentials that attest to our operation as a reliable supplier and as a precious partner.

How do you view the synergies and collaborations between companies and organisations within the broader maritime cluster? What factors determine their success?
The demands on our industry are constantly changing due to new regulations aimed at transforming the future of shipping. The globalisation era leaves us no choice but to build synergies to respond to the current challenges consistently and accurately.
It is an integral part of Vanos S.A.'s nature to seek collaborations with reliable partners to meet a rapidly developing spectrum of needs and provide integrated solutions to all of our customers. Our well-established synergies and strategic partnerships project the image of a good ship supplier but also demonstrate the value of being reliable, implementing innovative solutions, and constantly striving to achieve goals, rather than expecting instant success. Vanos S.A. maintains and supports long-term business relationships based on mutual trust, respect, and faithful adherence to business ethics principles.

In your view, what are the most significant factors in the survival and success of Greek ship supply companies? In which sectors do you believe investments are vital?
Success is not only a word or a goal. It is also a critical performance indicator confirming a company's enduring presence and the respect it enjoys in its field. To succeed as a company, you must never

THAN JUST A SUPPLIER

stop trying to provide products and services that aptly reflect your growth and adaptability over the years. Therefore, it is vital for a company to continuously monitor market trends, try to be ahead of the competition, anticipate business developments, invest in new technologies, and recruit qualified people. Our future is driven by technology and sustainability; therefore, a well-organised investment plan should always include new technological innovations implemented by expert staff. I firmly believe that investments should focus on two key pillars: the human factor and technology.

Technology is the future, and the maritime industry is already moving towards it more sustainably due to technological progress. People are the vital element moving us forward by setting the standards, applying the latest technological innovations, upholding corporate values, and faithfully following the business ethics principles.

No equipment, software or other technological advance is helpful without the human factor that breathes life into it, ensuring customer satisfaction, mutual trust, and respect.

At Vanos S.A., we choose people willing to uphold the corporate culture and family values that have driven our company for almost a century. They are the key to our success story and the bright future that lies ahead of us.

How can a company of your size reposition itself to benefit from high-end technological solutions in the era of digitalisation and big data analytics?

The truth is that our company predicted our industry's transition to the digital age quite early. In parallel with digitising and constantly upgrading our operational structure and internal procedures, in cooperation with our long-term partners, we did the same with our product and services portfolio, especially those related to navigation.

For instance, we went from distributing nautical paper charts to now covering the whole spectrum of navigation equipment, including not only paper charts, but also e-charts, display equipment and more, while at the same time providing 24/7 technical support. Vanos S.A. can propose a combination of solutions and provide means to facilitate the transition from paper to electronic format. The company has already introduced specific cooperative schemes with partners focused on creating, developing, and providing high-end technology solutions.

How can a company benefit from its long-standing traditions and turn them into a competitive advantage?

VANOS S.A. has always relied on its founders' fundamental family values, now endorsed by Katerina Vanos, who belongs to the family company's third generation. The Vanos family traditions are our personal and business compass in retaining and evolving our company. These traditions are based primarily on trust and respect for our people and business partners, which ensure our reliability and solvency. Our vast experience has been built on solid foundations.

Our 93 years of successful presence in the industry prove that a company can adapt and respond to challenges, overcome obstacles, and deal with any difficulty.

Our vision is to move forward steadily, without concessions in our ethics or the quality of our services, confirming that VANOS S.A.'s people indeed are "Your Trusted Partners".

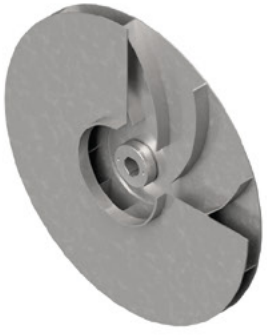
BELLOWS HELLAS

Expansion Joints - Fan Impellers

BELLOWS HELLAS O.E. has been manufacturing Expansion Joints and Fan Impellers for more than 20 years.

In order to streamline the requisition process and eliminate the need of samples, our design department has created template drawings outlining the required dimensions for all our products.

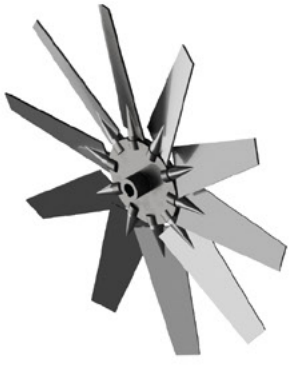
Fan Impellers Blowers



I.G.S. Fan Impellers
- Application: Inert Gas Supply
- Materials: SUS-316L

Centrifugal Blowers
- Application: Supply of air & various gasses
- Materials: SUS-316L, SS 400 & Aluminium

Sirocco Type Blowers
- Application: Air Conditioning.
- Materials: SUS-316L & SS 400

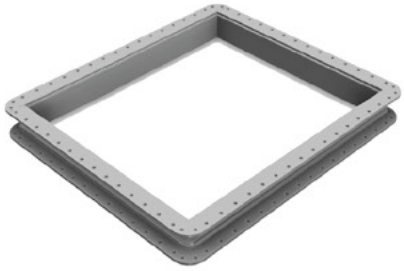


Axial Fans
- Application: Air Supply
- Blade Materials: Plastic & Alluminium

Expansion Joints

Axial Expansion Joints
- Application: Exhaust Gas
- Design: Single Multiply Bellow
- Size: DN50A – DN3000A
- Working Pressure: Up to 4 Bar
- Materials: SUS321, SUS316L, 254SMO

Universal Expansion Joints
- Application: Exhaust Gas
- Design: Double Multiply Bellow
- Size Range: DN50A – DN3000A
- Working Pressure: Up to 4 Bar
- Materials: SUS321, SUS316L, 254SMO



Rectangular Expansion Joints
- Application: Exhaust Gas, Air Duct
- Design: Single Ply Bellow
- Size: Upon Request
- Working Pressure: Up to 6 Bar
- Materials: SUS304, SUS316L, 254SMO

Steam Expansion Joints
- Application: Steam
- Design: Single Multiply Bellow
- Size: DN50A – DN400A
- Working Pressure: Up to 20 Bar
- Materials: SUS321, SUS316L

Sleeve Type Expansion Joints
- Application: Steam
- Size: DN65A – DN300A
- Working Pressure: Up to 16 Bar
- Materials: Body & Flanges ST-37.2, Sleeves SUS304L

Dresser Type Expansion Joints
- Application: Cargo line,
- Size: DN80A – DN550A
- Working Pressure: Up to 10 Bar
- Materials: Steel ST-37.2 with conical rubber packing

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E: info@bellowshellas.com | W: www.bellowshellas.com

EFFORTS FOR EUROPEAN EXCELLENCE IN MARITIME TRAINING AND EDUCATION

THE KEY ROLE OF INTERNATIONAL PARTNERSHIPS

by **Despina Kiltidou**,
Attorney-at-Law, Doctor of Laws (Auth),
Post Doc researcher (UoM)

European Directives on Centres of Excellence

Three main issues in the global seafarers' labour market have forced the European Union (EU) to focus on maritime training and advanced levels of maritime education. Firstly, the EU acknowledges that the number of European officers has been steadily decreasing. Second, the increasing specialisation of ships has intensified the need for a sufficient number of people with the knowledge and practical experience to operate sophisticated ships. Finally, the importance of the maritime industry to the EU underlines the need to support the competitiveness of EU crews.

The Maritime Centers of Excellence (MCE) are at the core of European maritime competitiveness. However, the relevant Directives on maritime training and education do not clarify the operation of MCEs.

The idea of MCEs was conceived by the European Commission, which has been making efforts through its competent Commissioners to include them in European directives and specify their operation. For example, in the Report for the Amendment of Directive 2008/106/EC., in amendment 11, it is stated that: "A broad debate involving social partners, Member States, training institutions and other stakeholders is necessary to investigate the possibility of creating a voluntary system of harmonised certificates going beyond the STCW in the level of training, to increase the competitive advantage of European seafarers. Such an STCW+ could establish "maritime certificates of excellence" based on European maritime postgraduate courses, which would provide European seafarers with skills above and beyond those required at the international level. The increasing digitisation of the maritime

Furthermore, in amendment 9 of the same report, the Commission proposes the award of a European Maritime Diploma of Excellence, emphasising the benefits derived from the exchange of good practices among the Member States and that encouragement should be given to promoting the Erasmus+ scheme for seafarer training. At this point, it is worth noting that maritime Diplomas of Excellence are provided for in Directive 2019/1159 and Directive 2022/993. More precisely, in article 26 of Directive 2019/1159 and article 28 of Directive 2022/993, it is stressed that: "The Commission's evaluation report, which will be submitted no later than 4

August 2024, will include suggestions for follow-up actions to be taken in the light of that evaluation. The Commission will also evaluate any developments regarding a future consideration of the European Maritime Diplomas of Excellence, as underpinned by the recommendations provided by the social partners".

Essential tools promoting internationalisation, collaborations, and improved facilities

SKILLSEA, a recent academic project, examines the contemporary challenges faced by Maritime Education and Training institutions (METs) and Maritime Training Centers (MTCs) and focuses on the necessity of effective strategic planning, including tools designed to enable decision-makers to make choices against pre-determined criteria. The first tool is the Strategy Direction Location (STRA.D.L.) tool, which aims to facilitate decision-makers in choosing among strategic cooperation options open to METs in view of their internationalisation. The STRA.D.L allows METs/MTCs to map internal and external attributes and select their internationalisation partners. Its internal criteria pertain to the internal strategic plans of a MET or MTC, including internal facilities, modules etc. The external criteria refer to established international partnerships, international libraries, international students, exchange of students etc. The second tool is the Transcript International Transfer (Trans. IT) tool. This Module Similarity Tool supports the transferability and recognition of modules and helps assess the similarity of modules using the foundations of the European Quality Framework. The last tool, the Strategic Evaluation MET tool, is designed primarily for the (high-level) administration of METs and is useful for both internal and external evaluation of MET Institutions operable at the MET/module level.

To sum up, as not all European establishments face the same problems, the criteria mentioned above are flexible and adjustable to the evolving needs of MCEs in each country that is a member state of the EU. As can be concluded, strengthening internal evaluations and internationalising maritime education is at the heart of the academic community's interest, which plays a pivotal role in improving the MCEs.

Concluding remarks

The EU is making efforts to support the idea of advanced knowledge and training through maritime education (CME) certification. Nevertheless, a precise schedule has not yet been set for EU legislation. The Commission holds the initiative through the evaluation report to highlight the issue. Moreover, the European Parliament has called for cooperation between social partners without setting a concrete plan or defining their roles and tasks. Furthermore, both the SKILLSEA academic project and the European Directives mention that advanced level maritime knowledge can be approached through international partnerships and student exchange. However, the structure of these partnerships/student exchanges is not mentioned explicitly in the relevant European Directives. Finally, a further issue is that the EU focuses exclusively on upskilling EU seafarers. In contrast, the scope in other maritime countries is improving their maritime sector by including the upskilling in other maritime shore-based jobs.

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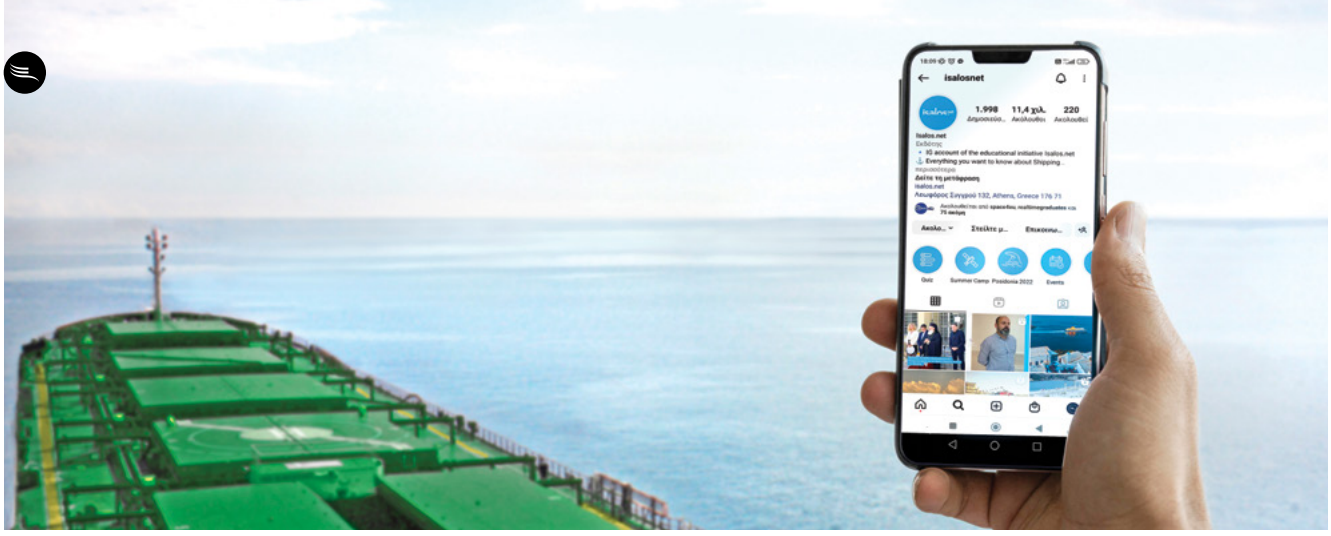
1 See Directive 2019/1159of the European Parliament and the Council, OJ L 188, 12.7.2019, p. 94–105 and Directive 2022/993 of the European Parliament and the Council, OJ L 169, 27.6.2022, p. 45–90.

2 See Report on the proposal for a directive of the European Parliament and of the Council amending Directive 2008/106/EC on the minimum level of training of seafarers and repealing Directive 2005/45/EC, COM(2018)0315, available at https://www.europarl.europa.eu/doceo/document/A-8-2019-0007_EN.html, accessed at 29.08.22

3 See https://www.skillsea.eu/index.php/news-events/news/140-3-skillsea-innovative-tools-to-try.



GREEK CADETS AND THE INTERNET

By: Manos Charitos

The Naftika Chronika team conducts an annual survey of first-year students at the Merchant Marine Academies of Greece to explore, among other things, their vision for their studies and the factors that have determined their choice to follow the maritime profession.
In the following pages, we present the second part of the 2022 survey focusing specifically on the relationship of first-year maritime students with the Internet.

SURVEY METHODOLOGY

For the survey, we created a 21-question questionnaire[1] that was distributed to first-year students of the Merchant Marine Academies electronically during the period December 2021-February 2022, when the students were in the first semester of their studies[2], to be completed anonymously.
To analyse the data, we used the statistical software STATA v.15.0.

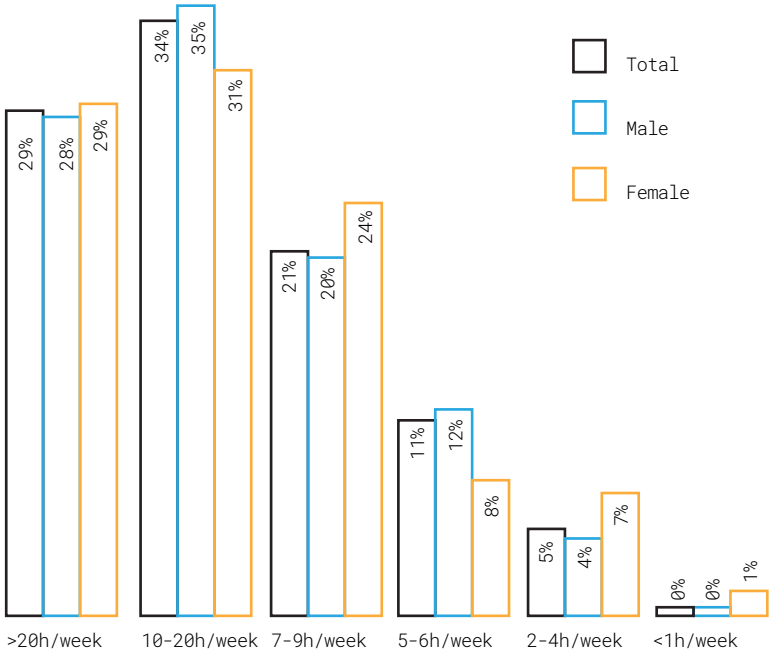
DATA ANALYSIS

The initial sample consisted of 998 responses from first-year students from the country's 11 Merchant Marine Academies and Warsash Maritime Academy students studying at the Metropolitan College in Piraeus. After excluding uncompleted or invalid questionnaires, the sample comprised 873 responses, representing 65% of the 1,352 first-year Merchant Marine Academies students.

THE AMOUNT OF TIME SPENT ON THE INTERNET BY ASPIRING SEAFARERS

First-year students who took part in the survey answered that they use the Internet quite a lot in their daily lives, which is not very surprising, as technology and the Internet are essentially synonymous with Generation Z, to which the survey participants belong.

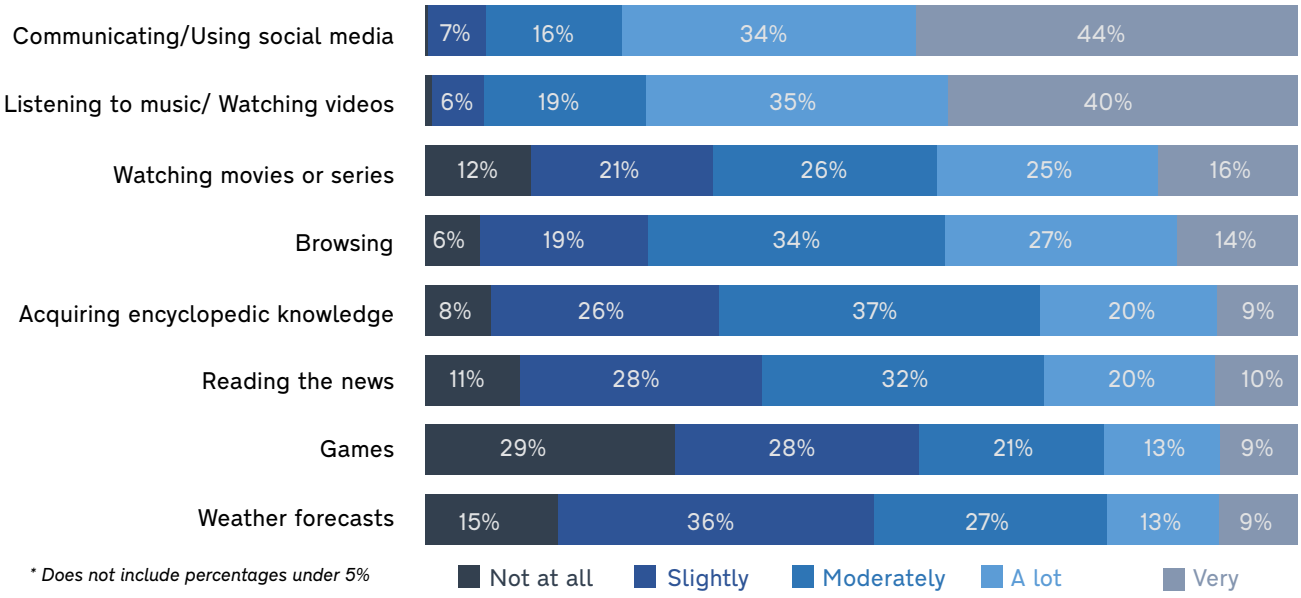
Figure 1: Distribution of the first-year students who participated in the survey based on the time they spend on the Internet



1. Before distributing the questionnaire, there had been correspondence with the Directorate of Maritime Education at the Ministry of Shipping and Insular Policy, which approved its distribution to the Naval Academies.
2. The specific period was considered appropriate as the first-year students would have attended a sufficient number of courses and talked with representatives of shipping companies, student organisations, and their colleagues to answer the questionnaire.

Figure 2

The graph below shows the reasons for which first-year cadets use the Internet and how important they consider each reason on a scale from "not at important" to "very important".



** Does not include percentages under 5%*

Indicatively, almost three out of ten (29%) of the survey participants answered that they use the Internet for more than 20 hours a week (i.e., at least 2.8 hours a day) compared to over a third (36%) of participants, who answered they use it for less than 10 hours a week.

Four out of ten (40%) female first-year students answered that they use the Internet for less than 10 hours a week. For male first-year students, this percentage does not change significantly (36%).

REASONS FOR USING THE INTERNET

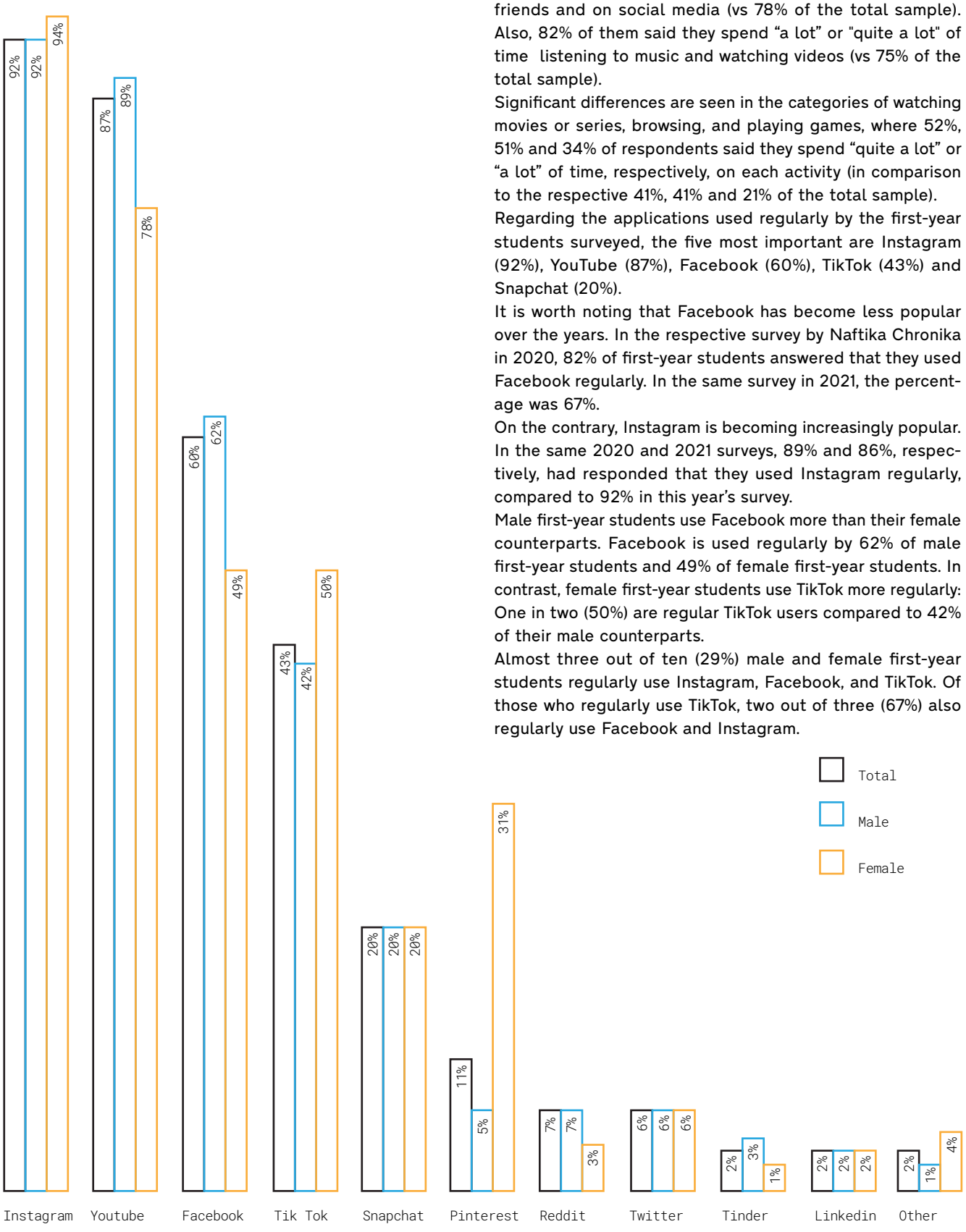
Of the first-year students surveyed, almost eight out of ten (78%) said they use the Internet "quite a lot" or "a lot" to communicate with friends or use social media. For female students, this percentage increases to 85% (vs 76% for male students).

A particularly important reason first-year students use the Internet is to play music or videos. Three out of four said they use the Internet "a lot" or "very much" to play music or videos. Between the two sexes, the percentages do not differ significantly (77% for female students and 74% for male students).

Using the Internet for games or weather forecasts seems less important to first-year maritime students. 57% of students answered that gaming is a "slightly" important or "not at all" important reason for using the Internet. The respective percentage for weather forecasts was 51%. However, one significant difference between the two sexes is that more than three out of four female respondents (78%) said that games are a "slightly" important or a "not at all" important reason for using the Internet.

As mentioned earlier, 250 (or 29%) of the first-

Figure 3: The percentage of participants who use the main social media applications



year students surveyed answered that they spend more than 20 hours a week on the Internet. 85% of them answered that they spend “quite a lot” or “a lot” of time communicating with friends and on social media (vs 78% of the total sample). Also, 82% of them said they spend “a lot” or "quite a lot" of time listening to music and watching videos (vs 75% of the total sample).

Significant differences are seen in the categories of watching movies or series, browsing, and playing games, where 52%, 51% and 34% of respondents said they spend “quite a lot” or “a lot” of time, respectively, on each activity (in comparison to the respective 41%, 41% and 21% of the total sample).

Regarding the applications used regularly by the first-year students surveyed, the five most important are Instagram (92%), YouTube (87%), Facebook (60%), TikTok (43%) and Snapchat (20%).

It is worth noting that Facebook has become less popular over the years. In the respective survey by Naftika Chronika in 2020, 82% of first-year students answered that they used Facebook regularly. In the same survey in 2021, the percentage was 67%.

On the contrary, Instagram is becoming increasingly popular. In the same 2020 and 2021 surveys, 89% and 86%, respectively, had responded that they used Instagram regularly, compared to 92% in this year’s survey.

Male first-year students use Facebook more than their female counterparts. Facebook is used regularly by 62% of male first-year students and 49% of female first-year students. In contrast, female first-year students use TikTok more regularly: One in two (50%) are regular TikTok users compared to 42% of their male counterparts.

Almost three out of ten (29%) male and female first-year students regularly use Instagram, Facebook, and TikTok. Of those who regularly use TikTok, two out of three (67%) also regularly use Facebook and Instagram.

The academic year 2021-2022, like the previous few years, was a challenging period due to significant unprecedented world events that have left their mark on the world economy, trade, education, and, above all, the everyday lives of billions of people. However, as the common saying goes, in the middle of difficulty lies opportunity, so these crises offered unique opportunities for creativity and out-of-the-box thinking in environments where adaptability is the ultimate aim (and most sought-after skill) of all individuals, companies and organisations.

In the past 12 months, Isalos.net has remained focused on further expanding its digital network; educating and informing students and young professionals all over Greece about recent developments and career opportunities within shipping; organising seminars and conferences; establishing new synergies and collaborations, and bringing new things to the table, such as the inter-relation between the shipping industry and the EU space technologies.

ISALOS.NET

THE COMMUNICATION CHANNEL BETWEEN GENERATION Z AND THE GREEK SHIPPING INDUSTRY

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ALBA Graduate Business School
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The American Club
Andriaki Shipping Co. Ltd.
Angelicoussis Shipping Group
- Maran Dry Management Inc.
- Maran Gas Maritime Inc.
- Maran Tankers Management Inc.

Arkas Hellas Shipping Agency S.A.
ASCOT Consulting
Atlantic Bulk Carriers Management Ltd.
Blue Planet Shipping Ltd.
Britannia P&I
Bureau Veritas
Capital Ship Management Corp.
Carras (Hellas) S.A.
Chartwell Maritime S.A.
Chevron
Costamare Shipping Company S.A.
D. Koronakis S.A.
Danaos Shipping Co. Ltd.
Dorian LPG
Diana Shipping Services S.A.
DNV
Dynamarine
Eastern Mediterranean Maritime Ltd.
Embassy and General Consulate of Panama in Greece
ENESEL
ERMA First S.A.
Euronav Ship Management (Hellas) Ltd.
Fafalios Shipping S.A.
Franman
GasLog LNG Services Ltd.
Genimar Shipping & Trading S.A.
Hellenic War Risks
HELMC - ICS Greek Branch
Iolcos Hellenic Maritime Enterprises
IONIC
JOTUN
Katradis Group
Kyklades Maritime Corporation
Lalizas
Latsco Marine Management Inc.
S. Livanos Hellas / Sun Enterprises Ltd.
Lloyd's Register
The London P&I Club
Macgregor
Marichem Marigases
Marine Tours
IRI / The Marshall Islands Registry
Maritime Cyprus
Metropolitan College / Maritime Academy
Minerva Marine Inc.
Mylaki Shipping Agency Ltd.
NEDA Maritime Agency Co. Ltd.
Nexus Intelligent Agency
Nereus Shipping S.A.
North of England P&I Association
Orpheus Marine Transport Corporation
Pantheon Tankers Management Ltd.
Pavimar S.A.
Polembros Shipping
Posidonia
Product Shipping & Trading S.A.
Queensway Navigation Co. Ltd.
Real Time Graduates
RINA
Sealink Navigation
Seaven Tanker and Dry Management
Springfield Shipping Co. Panama S.A.
SQLearn
The Signal Group
Thenamaris
TMS Tankers Ltd.
Tototheo Maritime
Tsakos Group
United Overseas Management (Hellas) Ltd.
University of Piraeus / Dpt. of Maritime Studies
UK P&I Club
VANOS S.A.
W Marine Inc.
West of England P&I Club

DIGITAL PRESENCE

Isalos.net's primary goal since its inception in 2015 has been to maintain an open and continuous dialogue between the new generation and the maritime community. For anyone aiming at the active participation and engagement of Gen Z members in this dialogue, the ultimate place to be is, undoubtedly, in social media.

Since last September, the Isalos.net team has invested heavily in further developing its digital network, reaching new milestones, and being in daily contact with seafarers and young people all over Greece – who are interested in the shipping industry and even young people abroad! From September 2021 to August 2022, the website www.isalos.net has attracted more than 750,000 visits by almost 300,000 individual users. In addition, the Isalos.net community includes more than 11,400 Instagram, 7,800 LinkedIn, and nearly 3,700 YouTube members!

EDUCATIONAL SEMINARS

During the same period, Isalos.net continued to hold seminars and conferences, either in person or online, when COVID-19 restrictions demanded social distancing. Of course, most of the events took place at the welcoming facilities of the Eugenides and the Aikaterini Laskaridis Foundations.

As mentioned before, in difficulty lies opportunity, so the live-streaming of all Isalos.net events has brought a significant benefit: people worldwide can now join any Isalos.net event, even if they are travelling onboard a Suezmax tanker in the middle of the Indian Ocean.

It is noteworthy that in the previous academic year, in addition to the 3,000 participants in the 16 Isalos.net events, the live-streamed Isalos.net events got more than 85,000 views!

The academic year's first meeting took place on World Maritime Day (29 September 2021) at the Eugenides Foundation to honour the tireless work of the international maritime industry workers.

Snapshot from the Isalos.net educational conference on the occasion of the IMO's World Maritime Day, titled: "Seafarers: Protagonists in the future of the shipping industry".
(L-R): Mr. Filippos Fortomas (MP, Cyclades), Mr Aris Koropoulis (Astra Shipmanagement Inc.), Mrs Elina Souli (WISTA Hellas & American P&I Club), Mr Ilias Bissias (Naftika Chronika, Isalos.net), Mrs. Metaxia Psalti (Neda Maritime Agency Co Ltd.),Capt. Michalis Fotinos (Masters and Mates Union of the Greek Merchant Marine & Diana Shipping Services S.A.), Capt. Ioannis Tsouras (Alpha Bulkers Shipmanagement Inc.), Mr Leonidas Dimitriadis Evgenidis (IMO Maritime Ambassador & Eugenides Foundation) along with Merchant Marine officers from the shipping companies: Kyklades Maritime Corp., Pantheon Tankers Management Ltd., Polembros Shipping, Andriaki Shipping Co. Ltd., Alpha Bulkers Shipmanagement Inc.

Snapshot from the educational seminar titled: "Current Risks in Shipping: The role of Marine Insurance". (L-R): Dr. Nicholas Berketis (J. Kouroutis & Co. Ltd.), Mr Kostas Katsoulieris (North of England P&I Club), Mrs Athina Sirimi (The London P&I Club), Mr George Mathioudakis (Tsakos Columbia Shipmanagement S.A.), Mr Konstantinos Samaritis (The Britannia Steam Ship Insurance Association Europe), Mrs Vivi Koliopoulou (Angelicoussis Group)

The conference theme was "Seafarers: Protagonists in the future of the shipping industry".

The event was followed by a digital debate on EU Green Shipping entitled "Green Shipping & New Technologies: Innovation and Sustainability for the European Maritime Industry" on 22 October 2021.

On 24 November, Isalos.net organised a workshop on "SIRE 2.0: Opportunities and challenges of the new tanker risk assessment tool" at the Eugenides Foundation's Main Auditorium.

The first 2022 seminar was held online on 26 January. It was entitled "Artificial Intelligence: Research and Applications in the Shipping Industry", while the second, attended in person, took place on 28 February at the Aikaterini Laskaridis Foundation and was entitled "Current Risks in Shipping: The role of Marine Insurance".

The last educational seminar for the academic year 2021-2022 took place at the Eugenides Foundation on 12 May 2022, under the auspices of the Managing Authority of the North Aegean Region in collaboration with the Municipality of Oinousses, the Oinousses Friends Association and the Oinoussai Benevolent Fund. It was titled "Collectiveness & Transcendence: The International Dimension of Oinoussian Shipping". The event was also the premiere of two mini-films produced by Isalos.net, aiming to highlight the maritime tradition and the beauty of the Oinoussian Archipelagos.

PROMOTING THE SEAFARING PROFESSION

With the kind collaboration of the Eugenides Foundation, Isalos.net has again travelled around cities in Greece this year to promote the seafaring profession and inform High School students about the prospects of a career at sea.

The first stop was Kerkyra (16 May) and Ioannina (17 May), where, at the invitation of the 3rd Hellenic Coast Coastguard Regional Command, the Isalos.net team had the opportunity to participate in the career events entitled “The Only Road is the Sea: Prospects of the Maritime Profession”.

Snapshot from the event organised in Ioannina by the 3rd Hellenic Coast Coastguard Regional Command to inform students of the local high schools about the prospects of the seafaring professions. (L-R): Capt. Pantelis Kikeris (Merchant Marine Academy of Epirus), Dr. Evangelos Kyriazopoulos (Secretary General, Ministry of Shipping & Insular Policy), Mr Leonidas Dimitriadis Evgenidis (IMO Maritime Ambassador & Eugenides Foundation), Capt. Amalia Koulouri (Merchant Marine Academy of Epirus), Mr Konstantinos Kampourakis (Regional Directorate of Primary & Secondary Education of Epirus), Mr Dimitris Papachristos (Eugenides Foundation), Mr Ilias Bissias (Naftika Chronika & Isalos.net) & Commodore Evriviades Sapounas (3rd HCG Regional Command) along with officers of the Hellenic Coast Guard.

The organisers and speakers of the career event organised in Alexandroupolis for the launch of the maritime specialisation subjects at the 4th Vocational High School of Alexandroupolis. (L-R): Capt. Achilleas Aslanidis (Maran Gas Maritime Inc.), Mr Dimitris Papachristos (Eugenides Foundation), Mr Christos Dermentzopoulos (MP, Evros), Mr Vaggelis Loukipoudis (Alpha Bulkers Shipmanagement Inc.), Dr. Evangelos Kyriazopoulos (Secretary General, Ministry of Shipping & Insular Policy), Mr Christos Koules (Maran Gas Maritime Inc.), Capt. Ilias Tsepelas (Polembros Shipping), Mrs. Eleni Plakoti (Directorate of Primary and Secondary Education Evros), Capt. Stratos Psyrras (Harbour Master- Central Port Authority of Alexandroupoli), Mrs Vasiliki Kalamari (4th Vocational High School of Alexandroupolis)

Carras (Hellas) S.A.

Carras (Hellas) S.A.
65 Akti Miaouli - Piraeus 185 36 - Greece
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GO MARITIME EVENTS

The Go Maritime career days in the academic year 2021-2022 allowed more than 1,700 Merchant Marine Academy students to be informed about their responsibilities and obligations during their first educational trip. They also had the opportunity to discuss and submit job applications to shipping companies that attended the events as exhibitors. All Go Maritime events are organised with the invaluable support of the Navy Training Directorate of the Hellenic Ministry of Shipping and Insular Policy, the administrative and academic staff of the Merchant Marine Academies, and the Eugenides Foundation.

The 19th Go Maritime event took place on Friday, 10 December 2021, at the Crete Merchant Marine Academy facilities in Souda, Chania, with over 500 students and 13 shipping companies participating.

The 20th Go Maritime event took place on 12 March 2022 in the welcoming auditorium of the Eugenides Foundation in Paleo Faliro. The event was attended by over 350 students from the Merchant Marine Academies of Epirus, the Ionian Islands, Kalymnos, Kymi, Oinousses, Syros, Hydra, Chios and the Metropolitan College- Warsash Maritime Academy, as well as executives of 24 shipping and shipping-related companies.

On 24 March 2022, the Go Maritime event headed north to the Macedonia Merchant Marine Academy in Nea Michaniona. The conference was attended by 330 first-year, 280 final-year students, and 16 companies that participated with individual stands.

The last Go Maritime event for the academic year 2021-2022 was an important milestone for Isalos.net as it was the first such event to be held at the Aspropyrgos Merchant Marine Academy. It took place on 5 May 2022 and was attended by a total of 330 first-year students and 31 shipping company representatives.

Snapshot from the Go Maritime event in the Merchant Marine Academy of Aspropyrgos

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ELECTRIC FERRIES

Since 2019, the Royal Norwegian Embassy in Athens and Isalos.net have co-organised a conference that would offer a common ground for mutually beneficial discussions between Greek and Norwegian maritime stakeholders. This year, the conference, held on 31 May at the Eugenides Planetarium, was entitled “Electric Ferries: Establishing a new industry in Greece”. The event’s main objective was the exchange of views and experiences between Greek and Norwegian shipping industry representatives, focusing on the prospects of electric ferries and short-distance ships.

A YEAR OF DISTINCTION

In 2021, the Lloyd’s List Greek Shipping Awards jury selected Isalos.net as the winner of the “Award for Achievement in Education or Training”. The jury awarded the Isalos.net initiative for its overall contribution to training young people who wish to pursue a career at sea and providing an effective communication channel between the shipping industry and the younger generation.

POSIDONIA 2022

This year, Isalos.net also debuted at the Posidonia 2022 as an exhibitor. During this highly successful shipping event, the Isalos.net team welcomed a large number of students, cadets, and young professionals from all over the world to inform them about their initiatives; They also gave them the opportunity to take a short quiz and win the Isalos.net baggage tag.

In addition, Isalos.net & Real Time Graduates, continuing the tradition they started four years ago, organised their 4th Posidonia Conference entitled “At the Helm of Global Shipping: Ensuring Continuity in times of Change”, which was held on Thursday, 9 June and was attended by 180 participants. During the conference, prominent members of the shipping community shared their thoughts on the future of shipping.

Snapshot from the Royal Norwegian Embassy in Athens and Isalos.net Conference on Electric Ships that took place at the Eugenides Planetarium. (L-R): Prof. Dimitris Lyridis (NTUA), Mr. Finn Arne Rognstad (Corvus Energy), Mr. Narve Mjøs (Green Shipping Programme), Dr. Nikolaos Liapis (Hellenic Institute of Marine Technology), Mr Stavros Hatzigrigoris (MARTECMA), Mr Dimos Halcoussis (Diana Wilhelmsen Management Ltd.)

Snapshot from the Isalos.net & Real Time Graduates Posidonia Conference. (L-R): Mr. Dimitris Monoudis (Hellenic Engineers Society of Great Britain & Rethymnis & Kulukundis Ltd.), Dr. George Pateras (Hellenic Chamber of Shipping), Mr Haralambos Fafalios (Greek Shipping Co-operation Committee & Fafalios Ltd.), Capt. Vassilios Th. Terzis (Queensway Navigation Co. Ltd), Mrs Despina Panayiotou Theodosiou (WISTA International & Tototheo Maritime), Mr Roberto Coustas (DeepSea), Mr George A. Papagiannopoulos (Common Progress Co NA S.A.), Mr Dimitrios Patrikios (Kyklades Maritime Corporation), Dr. Kostas G. Gkonis (INTERCARGO)

SUMMER SCHOOL

Scan here for press releases of all previous Isalos.net events

Isalos.net, in collaboration with the European Union Agency for the Space Program (EUSPA), organised the 1st Pytheas Maritime Space Forum at the Eugenides Foundation in Athens from 15 to 17 July 2022, in which 70 young men and women from 14 European countries participated. The guest speakers were prominent members of the maritime and space communities.

Isalos.net's fifth consecutive Summer Camp was held under the auspices of the Ministry of Shipping and Insular Policy, the Ministry of Digital Governance, the Hellenic Chamber of Commerce, HELMEPA, HEMEXPO, WISTA Hellas and si-Cluster.

The Summer Camp, which took place at the Eugenides Foundation, included lectures, tours, excursions, and open dialogues on space technologies with applications in the maritime industry.

The Isalos.net team is already planning its initiatives and events for the next academic year. We remain focused on providing immediate answers to the concerns of seafarers and maritime professionals and information on practical issues they may face in their future careers.

Snapshot from the inaugural Conference of the 1st Pytheas Maritime-Space Forum. (L-R): Dr. Stefanos Chatzinikolaou (University of Piraeus), Dr. George Pateras (Hellenic Chamber of Shipping), Mrs Elpi Petraki (WISTA Hellas & Hellenic Shortsea Shipowners Association), Mrs Eleni Polychronopoulou (HEMEXPO, EPE S.A.), Mr Stavros Katsikadis (Greek Marinas Association, LAMDA Flisvos Marina A.E.)

Snapshot from the educational excursion at the Port of Lavrio that took place on the occasion of the 1st Pytheas Maritime Space Forum

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NEPTUNE LINES
NEPTUNE BARCELONA

The largest ever vessel in the Neptune Lines fleet

On July 12th, 2022, the naming and delivery ceremony for Neptune Lines' M/V Neptune Barcelona was held at the 3. Maj Shipyard in Rijeka.

The ceremony was honoured by the presence of the Croatian Prime Minister, Andrej Plenkovic, the Minister of Economy and Sustainable Development, Davor Filipovic, the Minister of Physical Planning, Construction and State Assets of Croatia, Ivan Paladina, the Minister of Maritime Affairs and Insular Policy of Greece, Giannis Plakiotakis, the Commandant of the Hellenic Coast Guard Vice Admiral HCG Georgios Alexandrakis, and the Ambassador of the Hellenic Republic in the Republic of Croatia, H.E. Antonia Katzourou.

Neptune Barcelona was designed and built by 3. Maj, a European shipyard whose long shipbuilding tradition includes the construction of car carrier vessels in line with the highest standards and safety regulations.

Neptune Lines' new 200-metre-long lady is the largest vessel in the Neptune Lines fleet and can accommodate up to 7,000 passenger cars or a combination of passenger cars and high & heavy equipment. The ship has adopted the latest technologies in order to reduce greenhouse gas emissions and remove sulphur from exhaust gases while lightweight material has been used for the construction of its desks, making it the ship with the lowest CO2 intensity in our fleet.

Neptune Lines' strategy to continuously upgrade its fleet to ensure it provides quality services to its customers through sustainable shipping will continue. As Neptune's Chair of the Board, Ms Melina Travlos said, "It is Neptune's choice, decision, and commitment to work with determination and vision for a better future for our industry, society, and our people, and a better world for the new generation".

NEPTUNE BARCELONA WILL FLY THE GREEK FLAG.

VESSEL PARTICULARS

Name
Neptune Barcelona

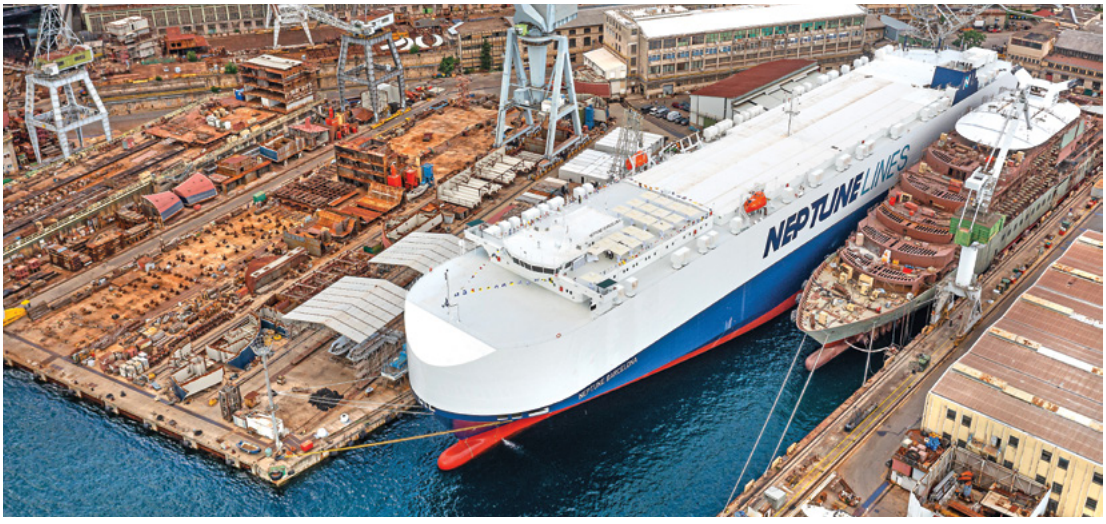
Type
Vehicle Carrier

Date of delivery
12 July 2022

Car capacity (RT)
6,868 units

DWT
17,416


NEPTUNE LINES
NEPTUNE BARCELONA


NEPTUNE LINES

TECHNOLOGY

Edited by:
Nikos Vergounis

MAERSK SECURES GREEN E-METHANOL

AP Moller-Maersk has signed a contract with Denmark-based REintegrate, a subsidiary of renewable energy firm European Energy, for the supply of green fuel for its first ship to run on carbon-neutral methanol.

REintegrate and European Energy will jointly build a new Danish facility to produce nearly 10,000t of carbon-neutral e-methanol, the expected annual requirement for the operation of that Maersk's carbon-neutral liner vessel. Maersk will work closely with REintegrate and European Energy on the development of the facility.

The methanol facility will use renewable energy and biogenic CO_2 to produce the e-methanol. Fuel production is expected to start in 2023. A Kassø, Southern Denmark solar farm will provide the energy needed for power-to-methanol production.

"This partnership could become a blueprint for scaling green fuel production through collaboration with partners across the industry ecosystem. It will provide us with valuable experience as we progress on our journey to decarbonise our customers' supply chains. Sourcing the fuels of the future is a significant challenge, and we need to be able to scale production in time. This agreement with European Energy/REintegrate brings us on track to deliver on our ambition of having the world's first container vessel operated on carbon-neutral methanol on the water by 2023," says Henriette Hallberg Thygesen, CEO of Fleet & Strategic Brands, A.P. Moller - Maersk.

NORSEPOWER TO INSTALL ROTOR SAILS ONBOARD TWO NEWBUILD CO2 CARRIER VESSELS

Norsepower Oy Ltd.,announced a contract with Dalian Shipbuilding Industry Co. Ltd. for the delivery of single Rotor Sails onboard two liquefied natural gas (LNG)-powered, wind-assisted CO_2 newbuild carriers commissioned by the Northern Lights JV. Northern Lights JV is developing the transportation and storage component of the Norwegian Longship project to decarbonise industrial emissions.

The two liquified CO_2 carriers will be equipped with one 28x4mNorsepower Rotor Sail on each vessel. Following calculations, Norsepower estimates that the Rotor Sails will reduce each vessel's fuel and CO_2 emissions by approximately 5%. The Norsepower Rotor Sail Solution is a modern version of the Flettner rotor, a spinning cylinder that uses the Magnus effect to harness wind power and generate thrust, reducing fuel consumption and emissions.

The two first-of-a-kind carriers have been designed by Northern Lights and are being built by China-based Dalian Shipbuilding Industry Company. The vessels will be equipped with Norsepower's

& SHIPBUILDING

wind-assisted propulsion system alongside other energy efficiency technologies, highlighting the benefits of integrating complementary clean tech solutions for maximum impact.

The Rotor Sails will be delivered in early 2023; after their construction has been completed, both 130m long ships, each with a cargo size of 7,500m³, are expected to be delivered in 2024. After commencing operations, the vessels will fill up with captured liquefied CO_2 from European emitters and carry it to the Northern Lights receiving terminal in Norway's Øygarden.

JOINT VENTURE TO DEVELOP AMMONIA BUNKERING VESSEL DESIGN

PaxOcean Engineering Pte. Ltd. has signed a Memorandum of Understanding (MOU) with Singapore-based bunker vessel operator Hong Lam Marine and classification society Bureau Veritas (BV) to jointly develop an ammonia bunker vessel design. With the signing of this MOU, PaxOcean will focus on developing designs for ammonia-fueled and ammonia bunkering vessels, leveraging its deep technological capabilities and expertise.

Bureau Veritas will verify compliance with the applicable and up-to-date rules, particularly those related to ammonia handling, drawing on BV's expertise in ammonia carriage and operations and previous technical studies on ammonia as a fuel.

Hong Lam Marine's role is to provide input specific to operational data and to support and validate the suitability of the ship design for commercial operations. The MOU will foster innovation in smart and autonomous ship technologies and support the use of green ammonia as a sustainable fuel to help decarbonise global shipping.

ROLLS-ROYCE AND SANLORENZO TEAM UP FOR METHANOL PROPULSION IN LUXURY YACHTS

Rolls-Royce and Italian yacht builder Sanlorenzo plan to develop and build a large motor yacht with a methanol engine propulsion system able to run carbon-neutrally on 'green' methanol. The two companies announced an exclusive memorandum of understanding to this effect for yachts between 40 and 70 meters on the eve of the opening of the 2022 Cannes Yachting Festival. Powered by two mtu methanol engines based on the Series 4000, the Sanlorenzo yacht is expected to undertake her maiden voyage in 2026.

Green methanol is climate-friendly and carbon-neutral because it is produced using solar or wind power: The first stage is to take hydrogen and synthesize it into methanol (CH3HO) using carbon and oxygen from the air. Carbon in the form of CO2 is released into the air during combustion – but no more than was taken from it during production of the fuel. As a result, the cycle is carbon-neu-

tral. The methanol engine, which is expected to be spark ignited, will be based on the winning mtu Series 4000.

JAPANESE COMPANIES AIM FOR BIOFUELS

Nippon Yusen Kabushiki Kaisha (NYK) and NYK Group company Shin-Nippon Kaiyosha Corporation (Shin-Nippon Kaiyosha) have started test navigation using Neste Renewable Diesel (hereinafter, NesteRD) supplied by Itochu Enex Co. Ltd. (hereinafter, Itochu Enex) in tugboats operated by Shin-Nippon Kaiyosha. This is the first case in which Japan uses a 100% concentration in a ship. Biofuels are made from renewable biological organic resources (biomass). Burning biofuels results in virtually zero carbon dioxide (CO2) emissions. As the demand for reductions in the greenhouse gases ("GHG") emitted from ships by oceangoing shipping worldwide has been growing, biofuels have attracted attention as a currently available alternative to heavy oil.

The biofuel used in this trial is Neste RD, which is being imported to Japan through a contract that Itochu Corporation has signed with the Neste OYJ Group, one of the world's largest renewable fuel manufacturers.

Neste RD is a 100% renewable fuel products manufactured from waste cooking oil and animal oil that the food industry would not use. It can reduce GHG emissions on a life cycle assessment* by about 90% compared to petroleum-derived diesel fuel. It can be used as a so-called "drop-in fuel," just like gasoline or diesel oil, without modifying the existing infrastructure. As a next-generation renewable fuel, NesteRD can significantly contribute to reducing GHG emissions by minimising the introduction of costly decarbonisation measures, so its future use in the shipping industry is expected to expand further.

NEW AIR LUBRICATION SYSTEM FOR SHIPS

Ecochlor announced in August the signing of a Collaborative Agreement with Armada Technologies, LLC. As part of the Agreement, Ecochlor will provide Armada with technical assistance and global sales and marketing support.

Andrew Marshall, Ecochlor CEO, commented, "I am very excited to introduce the Armada system to the maritime industry. Compared to hull lubrication competitors, the Armada system has a relatively low installation and operating cost. Its unique design uses less power than other hull lubrication technologies, decouples speed from drag reduction, and is easier to maintain. This provides an economic payback to the shipowner within a shorter period. A complete win for owners looking to reduce their carbon footprint whilst reducing costs!"

The Armada hull air lubrication system is expected to be available to shipowners by the end of 2022. Depending on hull design, the system will deliver an estimated fuel saving of 10 – 12%. It is effective regardless of fuel type, making it a key technology in transitioning to zero-carbon fuels.

"This Agreement with Ecochlor, a top-tiered, respected, global company, offers us the strong engineering, sales, and marketing support we need to jump into the maritime industry. We are very much looking forward to collaborating with their very experienced Team and our future alliance," said Alexander Routledge, CEO of Armada," said Alexander Routledge, CEO of Armada.

Routledge explains the concept behind the technology: "Our system is more advanced than any other hull lubrication technology on the market today. Armada utilises the ship's own forward motion to help drive the system. An eductor is used to draw air in whilst a series of microbubble emitters distribute the bubble swarm under the ship; this significantly reduces drag, offering clear and immediate benefits to any shipowner looking to reduce emissions on their ships."

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PROTECTING THE ENVIRONMENT WITH

IN NATURE PLASTIC IS STATIC

Globally, the amount of plastics recycling reaches 19,5% while 25,5% is incinerated, and the remaining 55% is disposed of in landfills. From the beginning of the industrial production of plastics in the 20th century until today, 7.3 billion tons of plastic waste have been produced worldwide, of which only 9% have been recycled and only 1% recycled more than once. Around 8 million tons of plastic waste, which unfortunately includes end-of-life synthetic mooring lines, end up in the oceans yearly, with all the known devastating consequences for aquatic ecosystems. These alarming rates confirm the dire need to develop solutions that do not burden the environment with the harmful effects of non-biodegradable plastic waste.

ECO

ROPE

KATRADIS
EST. 1936
KATRADIS GROUP OF COMPANIES

LOWER ENVIRONMENTAL IMPACT

KATRADIS has designed the High-Performance Eco Rope with the aim of leaving the smallest possible energy footprint compared to that left by ropes made of virgin industrial polymers, using a specific percentage of ECO Fibers, without any compromise in rope strength in mooring procedures. The ECO Rope is manufactured according to the high-quality specifications set by KATRADIS, ensuring that the strength of the rope required for the mooring operations is maintained at 100%.

Commenting on the High-Performance Eco Rope, Konstantinos Katradis, CEO of KATRADIS Group, said, “As a company that has been active in the wider shipping industry since 1936, ensuring our sustainable development has always been part of our values, which include our duties towards the environment and the wider society. We remain true to these values by constantly integrating new circular economy solutions and developing products produced with a much smaller environmental footprint.

WHAT ARE ECO FIBERS?

ECO Fibers are polymers with a lower environmental impact than common industrial polymers derived from the direct processing of crude oil and natural gas. They are made by melting polymers derived from unused plastics, and in this way, melted polyester is remade into polyester fibers or melted nylon into polyamide fibers.

ECO fiber production requires 59% less energy than primary industrial polymers, which is critical for protecting and conserving the planet's natural resources. That places them in a much better ranking in terms of carbon dioxide emissions than primary industrial polymers as it mitigates the effects of climate change and ensures a better-quality atmosphere and cleaner water resources for future generations. ECO fibers are Global Recycled Standard (GRS) certified. The GRS is a product standard for verifying the content of recycled materials in a final product. Its objectives are to ensure accurate content claims and to set standards for minimizing the harmful effects of chemicals on the environment.

BENEFITS FROM USING THE ECO ROPE

Instead of being disposed into the oceans at the end of their useful life, mooring ropes can be returned to be reused for the production of raw material, thus significantly reducing plastic waste. As the reuse melting of polyester or polyamide is a much less energy-intensive process than the production of primary polymers, it limits the consumption of natural energy resources and reduces CO2 emissions into the atmosphere, thus contributing significantly to the containment of climate change.

Eco Ropes help reduce plastic waste, and the reuse of plastic polymers gives a "second life" to non-biodegradable materials whose disposal in the oceans and landfills is fatal for marine life and destroys the environment.

Akis Zygouris, Marketing and RnD Executive of KATRADIS group, states: "For KATRADIS, innovation means continuous improvement of products and their production processes in order to get the best results for our customers and the environment. Eco Rope is our "greenest" rope as it maintains high quality and performance and at the same time helps to reduce industrial pollution. The use of these eco-friendly ropes can greatly improve the sustainable development of our shipping industry."

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POLAR RESEARCH VESSEL “SIR DAVID ATTENBOROUGH” READY FOR ANTARCTICA ADVENTURES

Plowing through polar ice exposes the risk of damage to a ship´s propulsion and steering equipment.

The 2021 British build one-of-a-kind research vessel “Sir David Attenborough” has completed extensive sea trials, and her first trip to Antarctica. At a yard stay at Orskov Yard in Denmark this summer, damage to the rudder equipment was confirmed. The cause of the damages found on the rudder equipment remains unknown, but MarineShaft got the order for repair of the rudder equipment, which was sent to MarineShaft´s workshop facilities in Hirtshals, Denmark.

Case: The rudder stock had turned inside the steering gear leaving scratches and marks on the upper part of the rudder stock. Furthermore, the rudder blade and rudder stock connection had suffered damage. The dimension of the rudder stock was Ø639 x 5720 mm.

Rudder stock

After MarineShaft’s inspection/measurements of the rudder stock, the steering gear rotor inner sleeve was removed. The rudder stock´s lower cone had been damaged.

MarineShaft has class approval to carry out class approved laser cladding and micro welding, and both “cold” welding techniques were used for this repair. The damaged areas were machined and prepared for welding, and liquid penetrant inspection was carried out before laser cladding. The spots/marks were repaired by micro welding - a welding technique that is ideal for smaller imparks/spots.

After machining the damaged areas on the rudder stock's lower cone and the rudder stock´s upper journal, we welded up the areas by laser cladding. Rebuilding damaged areas by laser cladding is a very fast and accurate welding method.

After the laser cladding process, the rudder stock was machined, and NDT tests were carried out ensuring that everything went according to class regulations, which in this case was LR.

Rudder blade

The damages inside the rudder cone were machined and fitted to the new dimension of the rudder stock cone.

Before returning the equipment, the rudder stock was treated with rust protection. On-site MarineShaft assisted the yard with mobile machining of the rudder trunk.

Go to MarineShaft.com for more information or use the contact details below.

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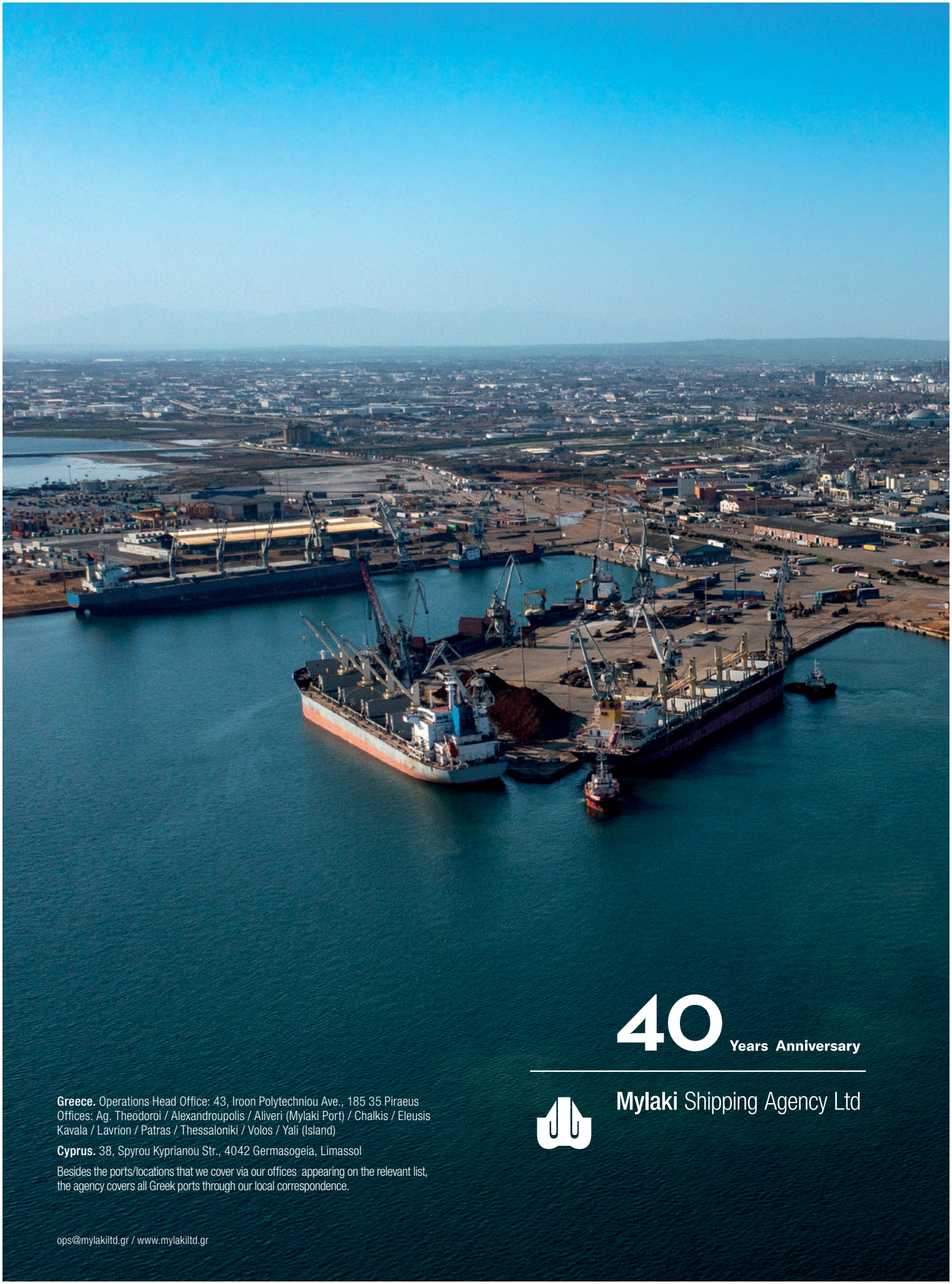
Phone: +45 96560202
Email: info@marineshaft.com



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Besides the ports/locations that we cover via our offices appearing on the relevant list, the agency covers all Greek ports through our local correspondence.

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No doubt we are all sad that summer has come to an end, although it was disappointing for most dry bulk shipowners, who saw their daily earnings dropping steeply and witnessed the BDI at 2-year lows.

DRY BULK MARKET: SUMMERTIME SADNESS

by **Sevi Katemoglou,**
Founder & Dry Cargo Shipbroker
at EastGate Shipping Inc

And although it is natural for market players to try to detect seasonal or other patterns to explain or predict the market cycles, the year thus far has been somewhat unpredictable. For the past several years, Q3 rates have been markedly higher than those achieved in the last quarter, but this year's weak summer rates have called into question the new pattern slowly starting to take shape.

August closed with Capesize bulkers achieving a weak US$2,500 per day on average, the medium-sized Kamsarmax carriers less than US$11,000 daily, and the Supramax vessels US$17,800/d. At the same time, futures marks have been on a proper freefall, weakening whatever confidence was left in the market. On a comforting note, when the market bottoms, the only way is back up!

China picture bleak

While the developments in the Russia-Ukraine front have definitely shaken things up, the main driver of the dry bulk market (and the one to usually blame when the physical market follows a downward spiral) is none other than China.

It is telling that the IMF has revised its forecast downward for China's 2022 full-year economic growth to 3.3%, a figure which, if realised, will be the lowest growth pace in over 4 decades. And although the Chinese banks have lowered mortgage rates and there are already announcements for upcoming policy support, the country's property sector (which consumes about a third of domestic steel demand) remains weak. Indicatively, China Merchants Bank's NPLs (non-performing loans) to property developers have doubled during the first half of the year to CNY11.20 billion, while the bank's credit losses during the same period jumped by 58% y/y, mainly due to real estate customers. That said, there has recently been talk about China releasing circa CNY300 billion (or US$44 billion) in infrastructure spending. Of course, this is welcome news for metals markets, but it might take several months for said funds to realise in the economy and trigger demand.

In the year's first seven months, Chinese steel production dropped by 6.4% compared to the same period last year. The downward trend in the country's steel output also justifies the decline in iron ore imports, found less by 3.4% y/y. Further, Goldman Sachs expects Chinese full-year steel demand to decline by 5%.

At the same time, China has suffered a severe heatwave and drought, the worst in 6 decades, affecting hydropower generation and forcing nearly 20 steel mills to temporarily shut down operations for about a week in mid-August, which, albeit for a short period, comes to highlight the country's ongoing power crisis and electricity shortages and has adversely impacted ore demand. At the time of writing, the spot price of iron ore 62% Fe delivered to China stands at about US$95/t.

For the balance of the year, we don't expect iron ore fundamentals to shift dramatically from the admittedly uncertain point at which they currently stand. China's (and the world's) softer

economic growth pace combined with manufacturing shutdowns, electricity rationing, low steel output, declining iron ore demand, easing port congestion, a deepening property crisis, and energy supply challenges are all putting together a not much appealing picture. Add to that the unknown Covid-19 factor with the possibility of further lockdowns come autumn, and you have a much uncertain future to deal with.

The summer was (super) dry

The recent extreme heat conditions across the Northern Hemisphere – China just experienced its driest summer in the last 61 years, Europe is facing its worst drought in 500 years, and the American West the worst drought in 1,200 years – underline the climate of aggravated energy crisis the world is currently living in.

Much has been written about the urgent need for environmental action to reduce dependency on fossil fuels. Still, a pragmatist would tell you that, for the time being, coal is virtually an indispensable fuel in producing electrical power.

If anything, the recent dry summer season and the Russia-Ukraine war have amplified that very reality: soaring gas prices, reduced hydropower generation (the largest source of clean energy), and a generalised power crunch are all working in favour of this fossil fuel. During the first two weeks of August, Chinese power plants burnt a total of 8.16 million tonnes of thermal coal, marking a considerable 15% increase from the same period last year; on 3 August, the daily thermal coal consumption hit a record high of 8.5 million tonnes.

However, this "rush for coal" incentivises China to boost domestic production of this dry fuel instead of importing more foreign coal (which would be a breath of fresh air for the shipping market). During the first half of the year, China mined 2.19 billion tonnes of thermal coal, an 11% rise from 1H21, whereas its total coal imports dropped by 17.5% y/y to 115 million tonnes.

The clear winner in coal flows, however, has been Russia. Even though Europe sanctioned Russian coal in August, China is following a different trajectory by upping its coal imports from Russia (at a convenient discount nonetheless): in July, the Asian nation imported 7.42 million tonnes of Russian coal, a 14% y/y rise and a 5-year

high. The trend of increased Russian coal flows into China is expected to advance during the fourth quarter when Chinese utilities are stock building ahead of the winter season.

India, the world's second-largest coal consumer and importer, has been following the same pattern: in July, it imported 1.29 million tonnes of Russian thermal coal, up 70.3% m/m, making Russia its third-largest coal supplier. This has been at the expense of Australian coal, with Queensland's coal exports in the first seven months of the year dropping by 6% y/y and DBCT's exports, in particular, reaching 5-year lows.

A global food crisis

The Russia-Ukraine conflict has exacerbated the looming food crisis. And, of course, geopolitics has been at the forefront of the news, affecting several parts of our daily lives, with shipping not being exempted from this reality.

Ukraine and Russia account for 30% of globally traded wheat and 20% of maise, which somewhat puts into perspective the world's supply shortage of grains and oilseeds. To address that issue, the UN brokered a landmark deal in July to designate a special grain corridor in the Black Sea to enable grain exports from the region and, to a certain extent, ease the global food crisis.

The deal was put forward mainly to free ships stranded in Black Sea ports since February when the Russia-Ukraine war broke out and, to a lesser extent, to allow fresh cargoes to enter the market. The latter is still a work in progress, as it raises a number of logistics and insurance complexities, which many owners do not seem keen to get themselves involved in for the moment.

In addition, Ukraine's grain harvest is forecast to drop by nearly 38% this year, owing to the ongoing war and adverse weather conditions; thus, we don't expect the Black Sea grain trade to have any significant positive effect on the freight rates in the mid-term. In the shorter term, however, Ukrainian officials expect that Ukraine will see its agricultural exports nearing 6.5 million tonnes in October, double what was exported in July.

As for the world's largest grain supplier, Brazil, the Latin American country is expected to up its soybean exports in the 2022/23 season to 92 million tonnes, up more than 19% compared to the previous marketing year. This gives hope to earnings projections for the medium-sized bulkers that usually carry the commodity on long-haul voyages.

Further, Canada is expected to harvest 55% more wheat than last year (about 34.6 million tonnes) and 42% more canola (circa 19.5 million tonnes, which would be the highest in 3 years).

Overall, China's feed needs remain elevated, lending hope to the shipping markets as China is said to be postponing its grain purchases until the last quarter in anticipation of a large US harvest (estimated at around 123 million tonnes), putting pressure on commodity prices.

Although the US dollar is continuously gaining value and the profit margins of Chinese crushers remain narrow, in the 2022/23 marketing year, China is estimated to up its soybean imports by nearly 9% to 98 million tonnes.

Volatility is your friend

Surely it can be an enemy too but in this moment in history with an array of unpredictable parameters running simultaneously, it would be easier (and most effective) to embrace volatility as an inherent element of this fascinating industry and make it your friend.

Yes, it is easier said than done. Still, the weakening world economic growth, geopolitics, ongoing global health crisis, food insecurity, extreme weather conditions, environmental targets, and decarbonisation objectives make for a sweet and sour cocktail.

Overall, the macro tonnage supply/demand fundamentals remain positive, which implies that the dry bulk outlook also remains cautiously positive for the mid to long-term.

What the low newbuilding orderbook, modest tonnage growth, projections for high fleet utilisation, and the upcoming EEXI requirements (expected to slow down the world's fleet) essentially mean is that a minimal increase in demand is required for dry bulk players to continue to navigate the freight market comfortably. And at least, that is something to get us all going towards the final stretch of the year.

The weakening world economic growth, geopolitics, an ongoing global health crisis, food insecurity, extreme weather conditions, environmental targets and decarbonisation objectives, make for a sweet and sour cocktail.

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COMMODITIES

Edited by:
Giannis Theodoropoulos,
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AN INSIGHT FOR SUPPLY AND DEMAND TRENDS

DRY BULK CARGOES

COAL

Indonesia blocks 48 coal miners' exports

On 9 August, the Indonesian Energy and Mineral Resources Minister announced that 71 coal miners had failed to meet their domestic market obligations and that 48 of them are now banned from exporting coal. The ban comes into force just as the EU ban on Russian coal has taken full effect and demand for non-Russian coal has been increasing.

Indonesia is the world's largest exporter of coal. In January 2022, the country completely banned coal exports to protect its domestic supply. Since the ban was lifted in February, miners have been obligated to sell 25% of coal in the domestic market to protect against future energy crises.

Despite legislators' concern over shrinking domestic coal stocks, for now, another outright ban on all coal exports remains unlikely. Inventories in the state's power utility company PLN remain above 4.5 million tonnes, a level considered to be secure.

The names of the 48 miners have not been revealed, and the Indonesia Coal Mining Association are contesting the ban.

The announcement comes only one month after Indonesia pledged to increase coal production to help meet demand from countries that have lost supplies from Russia.

"Indonesia is the world's largest exporter of coal. In 2021, the country exported 441.5 million tonnes of coal, equal to 31% of global coal exports. All exports are moved by ship and in 2021 were equal to 8% of global dry bulk cargo demand," says Niels Rasmussen, Chief Shipping Analyst at BIMCO.

The partial Indonesian export ban coincides with the full implementation of the European Union's ban on Russian coal. In 2021, The EU imported 39 million tonnes of coal from Russia, equal to 36% of EU coal imports. The EU's demand for coal has increased year-to-date and is expected to increase further as the bloc turns to coal to replace missing natural gas supplies from Russia.

Changes in the USA energy landscape

The amount of electric power produced from coal has been steadily declining in the United States over the past 10 years, falling to a 46-year low of 773,393 gigawatt-hours (GWh) in 2020. Although US coal-fired generation increased by 16% to 898,679 GWh in 2021, the US Energy Information Administration (EIA) forecasts a continued move away from coal. To be more competitive in the electric power market, some coal-fired plants are adding natural gas-fired generation to their coal-fired capacity (a fuel-flexible plant). The decline in US coal-fired generation has resulted chiefly from coal-fired plants becoming uneconomical compared with other sources of fuel for electric power. This loss of competitiveness has resulted in nearly one-third of the

US coal-fired fleet retiring since 2008, leaving about 205,000 megawatts (MW) in operation as of June 2022.

Some coal-fired power plant owners have taken steps to make their plants more competitive rather than permanently closing them, including making their plants fuel flexible. Adding this flexibility has allowed the plants to respond better to market conditions by burning the most economical fuel.

The EIA identified 13 US thermal plants that converted to fuel flexibility in the past five years. Eight plants are located in the Southeastern United States, mostly in Florida and the Carolinas. Arizona, Louisiana, Pennsylvania, Missouri, and Oklahoma have one plan each t. The 13 plants have a total generating capacity of 16,522 MW.

The 13 fuel-flexible plants have collectively diversified their fuel mix, consuming increasing amounts of natural gas. The share of natural gas use versus coal use at these plants increased from 10% natural gas in 2018 to 30% natural gas late in 2019, before reaching 38% natural gas in 2020, according to data from our Power Plant Operations Report. The rise in the natural gas share peaked when natural gas prices sank to low levels in 2020.

Although the flexibility to use both coal and natural gas may help these power plants extend their operations, competitive pressures in the market remain because the cost to be fuel flexible remains substantial, says the EIA.

IRON ORE-STEEL

Conflicting views on the future of the iron ore market

The long-term outlook of the iron ore market is more optimistic than the short-term view. Market analysts note that this may cause instability in iron ore prices.

The short and long-term outlook of the iron ore market largely depends on China, the largest steel producer and importer of 70% of the world's seaborne iron ore. However, the fact that there is uncertainty regarding the prospects of the Chinese economy makes it difficult to assess the future of the iron ore market.

BHP Group CEO Mike Henry weighed in on the issue, claiming that China will be a stabilising factor in commodity demand next year. According to Reuters, for this optimistic scenario to become a reality, there would have to be very few lockdowns in China, and any slowdown in global economic activity would have to be very short.

However, despite the optimistic outlook on China's iron ore imports in the coming months, the country's previously released figures for iron ore imports for 2022 sow a downward trend compared to 2021. In fact, this picture is also consistent with China's steel production this year. In July, output was 6.4% lower than a year ago.

The latest data on world steel production

The World Steel Association recently released data on world steel production in July 2022. World crude steel production for the 64 countries reporting to the World Steel Association was 149.3 million tonnes (Mt) in July 2022, a 6.5% decrease compared to July 2021.

The output of the top 10 steel-producing countries in 2022

- China: 81.4 Mt by July 2022, down 6.4% on July 2021
- India: 10.1 Mt, up 3.2%
- Japan: 7.3 Mt, down 8.5%.
- The United States: 7.0 Mt, down 6.4%
- Russia:5.5 Mt, down 13.2%.
- South Korea: 6.1 Mt, down 0.6%
- Germany: 3.0 Mt, down 2.0%
- Turkey: 2.7 Mt, down 20.7%.
- Brazil: 2.8 Mt, down 8.7%
- Iran: 2.0 Mt, up 34.1%

GRAINS

WHEAT

The latest forecasts on global production, consumption, and trade

The US Department of Agriculture (USDA) recently published its monthly "World Agricultural Supply and Demand Estimates" report for August. The global wheat outlook for 2022/23 is for higher supplies, greater consumption, increased trade, and fractionally lower stocks. Supplies are raised by 4.2 million tons to 1,055.9 million as higher production more than offsets reduced beginning stocks. Production is increased to a record 779.6 million tons, primarily on higher production for Russia, Australia, and China. Russia's production is raised 6.5 million tons to a record 88.0 million on higher harvested area and yield. Australia's production is raised 3.0 million tons to 33.0 million as increasingly favourable weather conditions indicate higher yield prospects. China's production is increased 3.0 million tons to 138.0 million tons on the National Bureau of Statistics summer grain report, primarily on the higher harvested area. Partially offsetting these increases are reductions for India and the EU.

Projected 2022/23 world consumption is raised 4.4 million tons to 788.6 million, led by higher feed and residual use for Russia and Australia. Projected 2022/23 global trade is raised 3.2 million tons to 208.6 million on higher exports by Russia, Australia, Ukraine, Canada, and the United States more than offsetting lower exports from the EU and Argentina. Russia's exports are raised to a record 42.0 million tons on greater exportable supplies and expectations that export prices will remain competitive. Projected 2022/23 world-ending stocks are reduced fractionally to 267.3 million tons and remain at the lowest level in six years.

Canada's production set to increase by 55 pct

Canada's 2022 wheat production is projected to increase by 55.1% year over year to 34.6 million tonnes, mainly attributable to better than anticipated yields and higher harvest area, notes Statistics Canada. It would be the third largest wheat crop in Canadian history if realised.

The increase is driven mainly by better growing conditions in Western Canada, according to Statistics Canada.

The anticipated yields are expected to rise by 41.6 % to 51.1 bushels per acre, and the harvested area is expected to increase by 9.4% to 24.9 million acres, the national statistical agency said, using satellite imagery and agroclimatic data to make the estimates. The increase in expected total wheat production is attributable primarily to spring wheat, which is anticipated to rise by 57.3 % to 25.6 million tonnes, and durum wheat production is expected to increase by 113% to 6.5 million tonnes, the agency said.

Due to record-high temperatures and little rain, the yield in 2021 decreased by 38.1% from 2020 to 31.6 bushels per acre, the lowest wheat yield in two decades, according to Statistics Canada.

As a result, Canadian wheat production in 2021 fell by 38.5% from 2020 to 21.7 million tonnes or an annual loss of 14 million tonnes.

SOYBEAN

World production to reach high record levels

With downward adjustments for maise and sorghum more than offsetting an increase for wheat, the International Grains Council's forecast on total grains (wheat and coarse grains) production for 2022/2023 is lowered by 4m t m/m (month-on-month), to 2,248m. The Council's soybean supply and demand figures in 2021/22 are little-changed m/m, with trade seen dropping by 3% y/y (year-on-year). Uprated outlooks for leading producers lift the 2022/23 output projection by 3m t m/m, to a record of 389mt (+11% y/y). Prospects for growth in uptake of soya products in feed, food and industrial sectors should support gains in total use, to a record of 379m t, while solid inventory accumulation is anticipated. Global import demand is tentatively seen rebounding by 8% y/y, with southern hemisphere exporters expected to account for an increased share of trade.

China lowers its import estimate

China's Ministry of Agriculture lowered its 2021/2022 soybean import estimate by 1.98 million tonnes, mainly due to reduced demand for animal feed. The revised estimate talks about soybean imports of 91.02 million tonnes this year.

Based on the same ministry report, Chinese soybean imports will be down 8.8% compared to last year, while the forecast for imports in 2022/2023 remained unchanged. The report said the ministry's estimate for corn production, imports, and consumption remained unchanged, although cold temperatures and heavy rains in the northeast may affect the market picture.

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CRUDE OIL

ING: The market is likely to remain in surplus for the remainder of this year

Stubborn Russian oil output and weaker than expected demand growth mean the oil market is likely to remain in surplus for the remainder of this year and into early next year, which should limit the upside in oil prices, says ING. Time spreads also point towards a looser market, with the backwardation in the prompt spreads narrowing significantly in recent weeks. The IEA estimates that Russian oil production was around 310Mbbls/d below pre-war levels in July. Despite sanctions, the decline in output has been much more modest than many in the market expected. IEA numbers suggest that Russian oil exports came in at 7.4MMbbls/d in July, which is only slightly below the 7.5MMbbls/d exported over 2021.

Demand growth forecasts have been consistently downgraded as we have moved through the year. And EIA data provides clear evidence of demand destruction. The US implied gasoline demand has underperformed since early June. Generally, expect demand to trend higher over the summer driving season. Still, higher prices have led to US gasoline demand trending quite some distance below the 5-year average (and this average includes 2020 data – a period of weaker demand due to Covid). EIA data shows that from early June through to early August, implied gasoline demand (4-week rolling average) in the US has lagged the 5-year average by almost 450Mbbls/d. In addition, Chinese demand has clearly been disappointing this year, leading to significant revisions to global demand estimates. There had been expectations that it would come back strong following the easing of lockdown measures in Beijing and Shanghai in the second quarter.

In 2022, global oil demand is expected to grow by a little over 2MMbbls/d, while a similar growth is expected for 2023, which would mean that in 2023, global oil demand will exceed pre-Covid levels. However, next year's growth will depend largely on a recovery in China and also on how severe any potential recession in the US and Europe is.

As a result, ING has lowered its oil price forecast for the remainder of this year. However, given that inventories are at historically low levels, ING still believes that prices will remain elevated, whilst limited OPEC spare capacity and uncertainty over how Russian flows will evolve once the EU ban comes into full force should also limit the downside in the medium term.

ING has lowered its 3Q22 and 4Q22 Brent forecasts from US$118/bbl and US$125/bbl to US$100/bbl and US$97/bbl, respectively. Its full-year 2023 Brent forecast has been revised from US$99/bl to US$97/bbl.

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Barclays sees surplus driving Brent prices down

British Barclays Bank has revised its oil price forecasts. As reported by Reuters, Barclays expects an oversupply of crude oil on the market in the short term, which will lead to a drop in prices; therefore, it lowered its Brent price forecasts by $8 per barrel for 2022 and 202. As for WTI, the latest forecast is for $99/barrel for both years. At the same time, the bank notes that due to the impending slowdown of the economy, which may lead to a drop in oil demand, OPEC+ may further reduce its production. In any event, such a reduction would not reach 2020 levels.

OPEC+ countries are expected to increase their monthly output by 100,000 bpd in September.

China's July imports hit a 4-year low

China is the world's largest importer of crude oil, accounting for approximately 25% of global crude import volumes. The country's crude imports are also equal to about 25% of global seaborne crude oil volumes, which contributed to about 30% of dirty tanker trade tonne miles in 2021, according to Signal Ocean statistics. From 2010 to 2020, China's crude imports grew at an average annual rate of 8.5% and have been the key demand driver for both crude oil and crude tanker demand, according to a BIMCO analysis.

According to the General Administration of Customs China (GACC), crude oil volumes in July amounted to 34.1 million tonnes. Volumes are thereby down 9.2% on 2021 and 27.2% lower than July 2020. January through July volumes has fallen 3.9% this year compared to the same period in 2021, which was already down 5.7% against 2020.

Seaborne volumes have fallen similarly; however, dirty tanker trade deadweight tonne miles have dropped 9.6% in the first seven months of 2022 compared to last year, according to Signal Ocean statistics. Compared to 2021, China has this year favoured imports from the Persian Gulf, Southeast Asia, and Russia over crude from Brazil, the USA, and West Africa. On average, longer trades have been replaced by shorter ones.

"Crude oil demand in China has suffered from low local demand due to COVID-19 lockdowns. A combination of high product inventories, a cap on retail gasoline and diesel prices once crude hits USD 80/barrel, and lower export quotas (so far 39% lower than in 2021) discouraging refineries from ramping up production have also hurt demand for crude oil," says BIMCO's Chief Shipping Analyst, Niels Rasmussen.

LIQUEFIED NATURAL GAS (LNG)

US: The largest exporter for the first half of 2022

The role of the US in global energy trade has been upgraded due to LNG as, in the first half of 2022, it became the world's largest liquefied natural gas (LNG) exporter for the first half of 202. According to data from International Association for Natural Gas - Cedigaz, US LNG exports increased by 12% in the first half of 2022 compared with the second half of 2021, averaging 11.2 billion cubic feet per day (Bcf/d). This increase was due to– increased LNG export capacity, the global increase in natu-

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ral gas and LNG prices, and increased global demand, particularly in Europe.
The EIA estimates that US LNG export capacity increased by an average of 1.9 Bcf/d. It is noted that natural gas and LNG prices also reached record highs in the fourth quarter of 2021 and the first half of 2022.
At the same time, European Union and United Kingdom LNG imports increased by 63% and averaged 14.8 billion cubic feet per day.

Finally, it is noted that Europe has imported more LNG to compensate for lower pipeline imports from Russia and to fill historically low natural gas storage inventories. In the first five months of the year, LNG imports in the EU and UK averaged 14.8 Bcf/d or 64% of total US exports.

Supply is expected to almost double in the coming years

As the global energy crisis deepens and countries scramble to secure reliable energy sources, investments in new liquefied natural gas (LNG) infrastructure are set to surge, reaching $42 billion annually in 2024, Rystad Energy research shows.
These greenfield investments will be 20 times the 2020 amount when a mere $2 billion was invested in LNG developments due to the pandemic. However, project approvals after 2024 are forecast to fall off a cliff as governments transition away from fossil fuels and accelerate investments in low-carbon energy infrastructure.
The new LNG projects are driven mainly by a short-term increase in natural gas demand in Europe and Asia due to Russia's war in Ukraine and ensuing sanctions and restrictions placed on Russian gas exports. Spending on greenfield LNG projects this year and next will stay relatively flat, with $28 billion approved in 2021 and $27 billion in 2022. Investments sanctioned in 2023 will show a modest increase, nearing $32 billion, before peaking at $42 billion in 2024. After this date, investments will decline and drop back near 2020 levels to reach $2.3 billion in 2029. Despite an expected jump in 2030, when project announcements are forecast to total nearly $20 billion, investment in greenfield LNG is unlikely to ever return to 2024 levels as countries scale up investments in low-carbon technologies.
Natural gas is a core component of many countries' power generation systems, and although there is the determination to reduce fossil fuel dependency and transition to a low-carbon power mix, demand for LNG is set to grow over the short term. Global gas demand is expected to surge 12.5% between now and 2030, from about 4 trillion cubic meters (Tcm) to around 4.5 Tcm. Gas demand in the Americas will remain relatively flat up to 2030. In contrast, on the back of strong economic growth and pro-gas policies from governments, regional demand in Asia and the Pacific will soar, growing 30% from about 900 billion cubic meters (Bcm) to around 1.16 Tcm by 2030. The Americas – primarily the US – will account for 30% of cumulative gas demand by 2030, while Asia-Pacific will account for 25%.
Helped by this new infrastructure, total LNG supply is expected to almost double in the coming years, growing from around 380 million tonnes per annum (Mtpa) in 2021 to about 636 Mtpa in 2030, with several major LNG projects already underway or in the pipeline. LNG output is predicted to peak at 705 Mtpa in 2034.

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The latest developments on the energy front

ENERGY &

Edited by:
Giannis Theodoropoulos

OPEC REVISES WORLD OIL DEMAND FOR H2 DOWNWARDS – IEA BEGS TO DIFFER

In August, OPEC lowered its previous estimate for global oil demand growth in 2022 but still saw a healthy growth of 3.1 mb/d, partly due to the recently observed trend of burning more crude in power generation.

Total oil demand is expected to average around 100 mb/d in 2022. The first half of this year was revised higher amid better-than-anticipated oil demand in the main OECD consuming countries.

However, oil demand in the second half of 2022 was revised downwards due to ongoing geopolitical uncertainty and fears of a resurgence of COVID-19 restrictions. For 2023, the global growth in oil demand forecast remains unchanged at 2.7 mb/d, with total demand averaging 102.7 mb/d. Oil demand in OECD countries is expected to grow by 0.6 mb/d and in non-OECD countries by 2.1 mb/d. Oil demand in 2023 is expected to be driven by a still-solid economic performance in major consuming countries, as well as improving geopolitical and COVID-19 conditions in all regions.

On the other hand, the International Energy Agency (IEA) forecasts that world oil demand will be higher for the remainder of the year. Nonetheless, it expects growth to slow from 5.1 mb/d in 1Q22 to a marginal 40 kb/d by 4Q 2022. World oil demand is now forecast to rise by 2.1 mb/d in 2022 to 99.7 mb/d and by a further 2.1 mb/d next year, when it will reach 101.8 mb/d, surpassing pre-Covid levels.

ENORMOUS NATURAL GAS DEPOSIT IN THE CRONOS FIELD OFF CYPRUS

Italian hydrocarbons company Eni announced that its joint venture with France's TotalEnergies had discovered a 70 billion cubic metres natural gas deposit included in the drilling license obtained by the two companies. The gas deposit, named Cronos, is 160 kilometres off the coast of Cyprus at a depth of 2,287 metres.

Italian daily La Repubblica has reported that this is an enormous natural gas deposit -one of the largest in the world, as it points out - and that it will take about a year before its exploitation can

NATURAL RESOURCES

begin. It adds that it will allow Italy and the whole of Europe energy autonomy.
La Repubblica has also reported that Israel has expressed interest in creating a natural gas pipeline that would pass through Cyprus and reach Greece and other EU countries.

NORWAY'S NATURAL GAS EXPORTS HIT A RECORD HIGH

Norway's natural gas exports reached a record-high $13.26 billion in July due to the soaring demand and energy prices in Europe driven by the disruption of Russian supplies.
Norway's Statistics Office published data showing a quadrupling of gas export revenue compared to July 2021 and a 5.7% increase in export volumes. According to the Statistics Office statement, the high energy prices prevailing in the international markets are the main reason for Norway's exceptionally high export value.
At the same time, analysts note that the Russian invasion has helped boost short-term demand for Norwegian natural gas, which may decrease in the long term as Europe must meet its emissions targets. On the other hand, it seems that German Chancellor Olaf Scholz is hoping for a helping hand from Norway. He described Norway as a "safe, democratic and reliable partner" in supplying Germany and Europe with energy. He called on the government in Oslo to expand natural gas production to reduce dependence on Russia. For its part, Oslo countered that Norway "delivers as much gas as possible".

IEA REVISES WORLD OIL SUPPLY UPWARDS

The outlook for world oil supply has been revised upward, with more limited declines in Russian supply than previously forecast. While Russia's exports of crude and oil products to Europe, the US, Japan, and South Korea have fallen by nearly 2.2 mb/d since the start of the war, the rerouting of flows to India, China, Turkey and others, along with seasonally higher Russian domestic demand has mitigated upstream losses.
By July, Russian oil production was only 310 kb/d below pre-war levels, while total oil exports were down just 580 kb/d. The EU embargo on Russian crude and product imports that comes into full effect in February 2023 is expected to result in further declines, as some 1 mb/d of products and 1.3 mb/d of crude would have to find new homes.
In a largely symbolic move, OPEC+ agreed in early August to raise its supply target by just 100 kb/d for September, significantly lower than the July and August scheduled increases of 648 kb/d. The group noted that "severely limited" spare capacity should be used with "great caution in response to severe supply disruptions", suggesting that substantial further OPEC+ output increases are unlikely in the coming months.
Even so, increases in global inventories are now projected at around 900 kb/d during the rest of this year and 500 kb/d over the first half of 2023. The release of additional emergency stocks through

at least October will provide further relief. By end-June, around 150 mb of the volumes committed through IEA collective actions and individual IEA member SPR sales had yet to find their way to the market. With OECD industry stocks still some 290 mb below their five-year average, such builds could help ease market tensions. But with supply increasingly at risk of disruptions, another price rally cannot be excluded.

GREEN LIGHT FOR LARGEST US OFFSHORE WIND FARM

Virginia State has given the green light to Dominion Energy's 2.6-GW Coastal Virginia Offshore Wind (CVOW) project.

This offshore wind farm will be the largest project of its kind in American waters and will consist of 176 wind turbines. As of 2026, the wind farm will be capable of producing enough energy to meet the needs of 660,000 homes per year.

The project's budget is $9.8 billion, and the offshore wind farm is expected to help Virginia residents to save approximately $3 billion during its first ten years of operation.

JAPAN RE-EMBRACES NUCLEAR POWER

The Japanese government plans to return to nuclear power by significantly boosting its nuclear power sector. This controversial sector was hit badly by the Fukushima disaster in 2011 but is back in the spotlight due to worldwide energy tensions.

Japanese Prime Minister Fumio Kishida recently announced that he would begin consultations on the possible construction of next-generation nuclear reactors, which marks a U-turn in government policy since the Fukushima crisis.

The Japanese Prime Minister also said the government intended to maximise the use of existing nuclear reactors, which have been granted permission by regulators to restart after the Fukushima disaster.

Like many other countries, Japan has been facing the problem of a significantly more expensive and difficult energy supply since Russia's war in Ukraine began six months ago.

The Japanese archipelago is primarily energy dependent on fossil fuel imports, so it seeks to strengthen its renewable energy sources.

CANADA AND GERMANY SIGN AGREEMENT ON GREEN HYDROGEN

The governments of Canada and Germany signed a cooperation agreement on producing and transporting renewable (or green) hydrogen during Chancellor Olaf Scholz's visit to Canada in August.

German Economy Minister Robert Habeck and Canadian Energy Minister Jonathan Wilkinson signed the agreement at a ceremony in Stephensville, Newfoundland, in the presence of German Chancellor Olaf Scholz and Canadian Prime Minister Justin Trudeau.

Trudeau spoke of a "historic step towards our common future" in his speech. "Our goal is clear: to work towards the first exports of Canadian hydrogen to Germany by 2025," said the Canadian prime minister.

For his part, the German chancellor stated that the agreement would upgrade the cooperation between the two countries to a more "strategic level".

Newfoundland in Canada is considered a favourable location for renewable hydrogen production, as it is often windy and sparsely populated.

Pure hydrogen (renewable or green hydrogen) is produced through the electrolysis of water and the use of electricity from renewable sources and emits no greenhouse gases during its production.

Currently, the cost of producing renewable hydrogen is higher than buying natural gas, but experts believe that green hydrogen can reduce energy bills in the medium term.

German energy companies Eon and Uniper have announced they had signed an MoU with Canada's Everwind on the sidelines of German-Canadian talks aimed at importing large-scale renewable hydrogen from Canada by 2025.

At the same time, the two companies are seeking an agreement to purchase annually up to 500,000 tonnes of ammonia – the chemical used in hydrogen transport.

A green hydrogen and ammonia production plant will be built in the Point Tupper village in the Canadian province of Nova Scotia. "The facility is at an advanced stage of development, and commercial operation is expected to begin in early 2025," according to Eon.

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LEGENDS & MILESTONES

Edited by:
Panagiotis Korakas

August 1964 - Legendary shipowners (L-R): C. M. Lemos, G. S. Livanos, B. P. Goulandris, J. N. Goulandris, M. Nomikos, and G. Chandris, sitting at the same table discussing industry matters during the First Maritime Conference.

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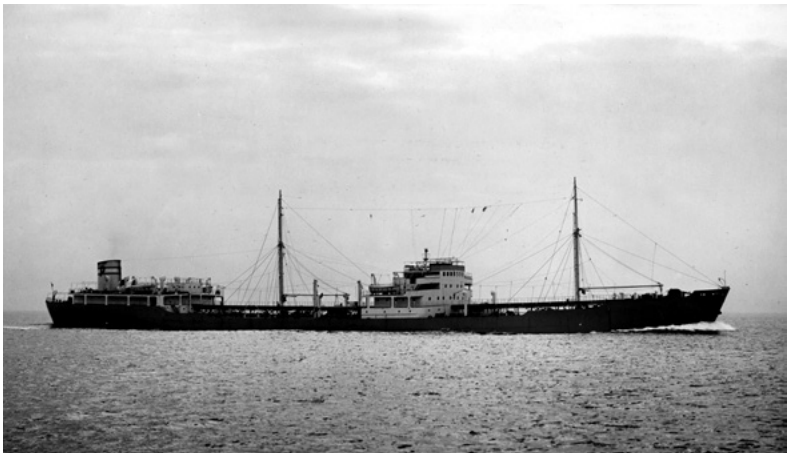
SEPTEMBER 2022

27 February 1969 - The containership “Hother Isle” was delivered to its owners at the Bremen shipyards. Pictured with the principles of the German shipyard are Mrs Caren Linardatos (sponsor of the vessel) and Mr P. Linardatos. Naftika Chronika had written back then that the vessel was one of the first Greek-owned containerships.

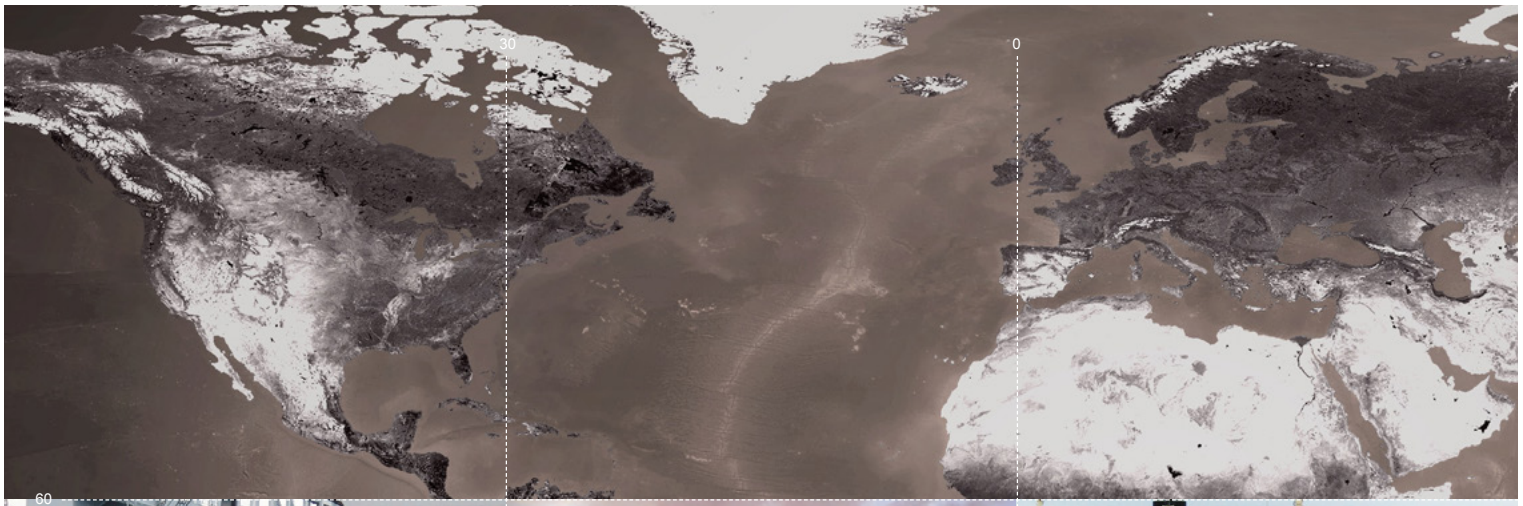
The upper bridge section of the “Eugenie S. Niarchos”, a tanker built for Stavros Niarchos by Kockums shipyards in Sweden in 1970.

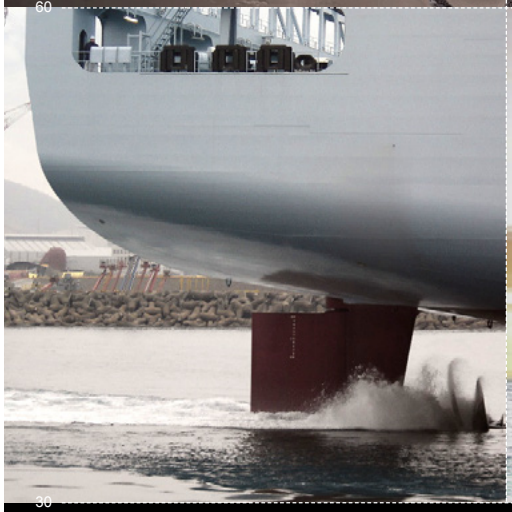
Aboard a Greek steamship during the Interwar period: The crew of the "Anna T.", a vessel bought in auction by L. Tergiazos in 1935.

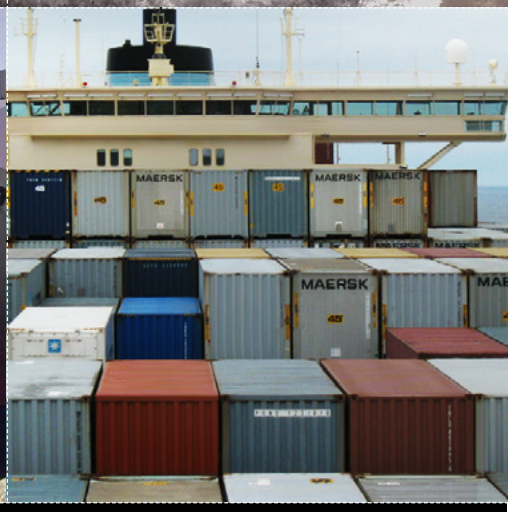
The "North King" - a tanker built in 1952 by Blythswood Shipbuilding in Glasgow for a company owned by the Papadakis Family.



"Flying the blue and white": The O.B.O "Epic Kolokotronis" was previously owned by a Norwegian company under the name "Høegh Hood" but was bought by the Kolokotronis Group in 1968 for 7 million dollars.







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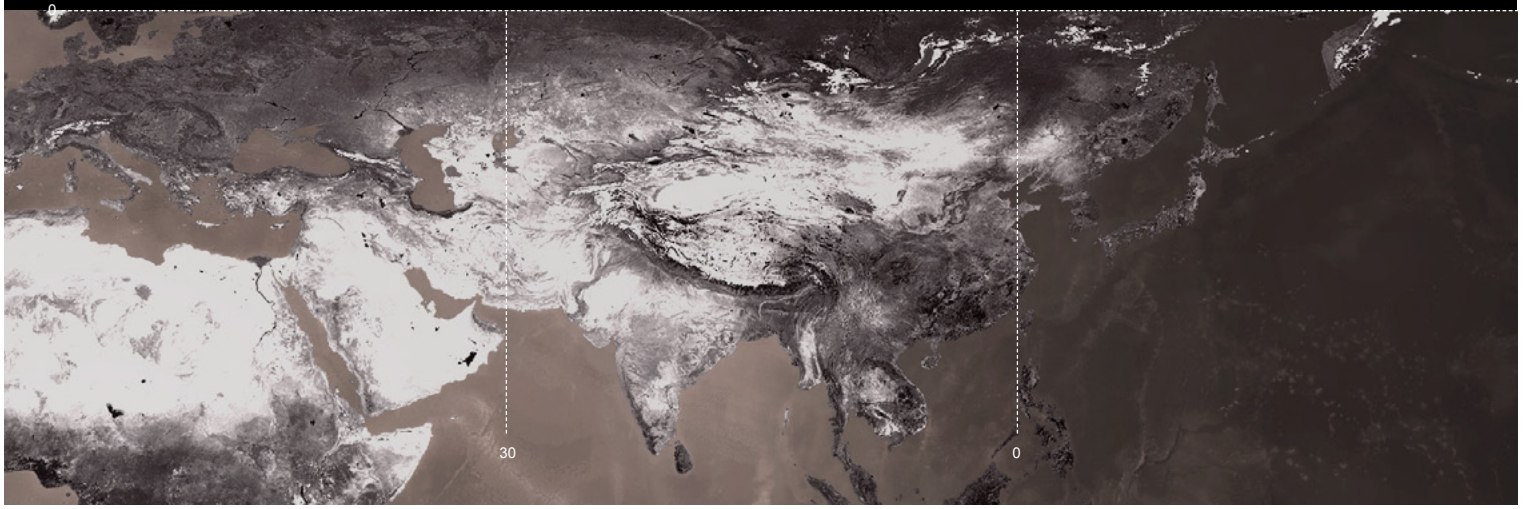

AVIATION INDUSTRY

Edited by: Manos Charitos

EMIRATES AND AEGEAN ANNOUNCE A CODESHARE PARTNERSHIP

Emirates and Aegean are activating a codeshare partnership, allowing the customers of both airlines to benefit from increased connectivity to eight domestic Greek points via Athens using a single ticket.

Emirates will place its code on Aegean-operated flights, providing customers with a convenient and seamless booking experience and one consistent baggage policy to popular destinations: Mykonos, Santorini, Corfu, Heraklion Rhodes, Thessaloniki, Chania, and Alexandroupolis. Under the codeshare agreement, Aegean will also place its code on Emirates-operated flights between Dubai and Athens for their customers to benefit from smooth connections to Dubai and onward.

Starting October 2022, Emirates and Aegean will extend their joint codeshare network further to include eight more European regional routes via Athens. The extended codeshare network will include, among others, Bucharest, Belgrade, and Naples, as well as westwards Emirates' flights to New York Newark from Athens, and New York JFK from Milan. Emirates currently serves Athens with 12 weekly flights operated by a Boeing 777. These additional codeshare routes will be subject to receiving the necessary regulatory approvals.

UPS ORDERS EIGHT MORE 767 FREIGHTERS

Boeing announced an order placed by UPS for eight more 767 Freighters. This codeshare network will increase UPS's 767 Freighter fleet to 108 aeroplanes, enabling the global carrier to modernise further and sustainably increase its fleet. "The additional 767s will help us continue to deliver what matters to UPS customers around the world. This is a very versatile aircraft that we operate across every region of the globe," said UPS Executive Vice President and President U.S. Nando Cesarone. "With these aircraft, our fleet will continue to be among the most modern in our industry, meeting our customers' needs while improving our efficiency, sustainability and reliability."

Air cargo continues to play a crucial role in global trade, from supporting supply chains to expanding e-commerce. The International Air Transport Association (IATA) has estimated that global air cargo revenue in 2021 had doubled relative to pre-pandemic 2019.

"This repeat order from UPS is a testament to the outstanding cargo capabilities of the 767 Freighter and further demonstrates Boeing's market leadership in the freighter segment," said Ihssane Mounir, Boeing senior vice president of Commercial Sales and Marketing.

UPS will begin taking delivery of these new aeroplanes in 2025, with an additional 767-300 Boeing Converted Freighter (BCF) entering service in late 2023. This purchase builds on UPS's order for 19 767 Freighters in December 2021.

THE IMPACT OF COVID-19 ON YOUNG AIR TRANSPORT WORKERS

The COVID-19 crisis introduced far-reaching effects on the economy, with air transport in particular hit hard by a decline in passengers. According to Eurostat, airlines and associated

enterprises reduced their employee numbers accordingly, with younger workers particularly affected.

In the first quarter of 2022, 325,600 people were employed in the air transport sector in the EU - the lowest number recorded in 14 years, according to Eurostat. Notably, the decrease can be attributed to workers between the ages of 15 and 39 (from 204,400 in Q1 2008 to 121,400 in Q1 2022, i.e., -83,000). Meanwhile, there was an increase - although milder - in workers between 40 and 64 years old (from 170,500 to 204,200, i.e., +33,700).

The pattern is similar when comparing the pre-pandemic first quarter of 2019 with the first quarter of 2022. While there was a significant decrease in workers aged between 15 and 39 (from 184,900 to 121,400, i.e., -63,500), there was a far smaller decrease in workers between the ages of 40 and 64 (from 225,500 to 204,200, i.e., -21,300).

When comparing employment by sex, males made up 58% of the workforce in the first quarter of 2022. This same balance was also recorded in the first quarter of 2008. The share of men in air transport was relatively stable over time.

However, while total employment in air transport in the EU decreased for both males and females during the pandemic, men were the first impacted in the second quarter of 2020, leading to a share of men equal to 53% in the second quarter of 2020. Then, in the third and fourth quarters of 2020, women were the most affected by the pandemic. Over the whole period between the first quarter of 2019 and the first quarter of 2022, males made up 60% of the decrease (-33,800 for females compared with -50,900 for males).

A TAILORED AIR ONE VERTIPORT CONCEPT FOR MASS TRANSIT EVTOLS

Urban-Air Port (UAP), the vertiport developer behind the Air One vertiport in Coventry, and GKN Aerospace are collaborating to explore smart infrastructure for Urban Air Mobility (UAM), specifically for large, high-capacity eVTOL passenger shuttle operations.

GKN Aerospace has recently completed the initial feasibility studies for the Skybus research project. The research project has explored the potential for a six-rotor, 30-person eVTOL concept to help decarbonise and decongest urban landscapes. The studies have identified significant opportunities for air 'buses' to operate alongside air taxis in future air mobility transport, primarily for intracity and airport shuttle services, with the potential to unlock access to more remote areas, such as islands and mountainous regions. Integration into urban environments with intermodal transport connectivity is key to the success of Skybus's larger-scale passenger transportation and is enabled by Air One's uniquely compact footprint and patented technologies.

The cost and feasibility of implementing such a system will be highly dependent on the land take of the vertiport. Therefore, a new eVTOL network introduced into a congested city must prioritise space efficiency. UAP's Air One model (one of UAP's suite of infrastructure solutions) is modular by design, scalable, ultra-compact, and affords a low CAPEX and OPEX infrastructure that can be tailored to serve larger eVTOLs such as Skybus whilst continuing to be vehicle agnostic. This enhanced Air One model includes multiple hangars, multi-level take-off and landing zones and flexible stands uniquely incorporating a Multiple Apron Ramp System (MARS) for eVTOLs. These are just some of Air One's new design features that will enable Skybus and other eVTOLs to co-exist and successfully operate in a dense urban environment. UAP's technology and modular systems were envisioned for an evolving regulatory environment. The new design responds to and informs recent EASA guidelines whilst delivering and building on the core DNA of UAP.

MARITIME NUMBERS

428

the number of tanker sales transactions in the period January – August 2022

70 B.m³

the natural gas reserves found in the Cronos field off the coast of Cyprus

3,100,000 BARRELS/ DAY

the increase in oil demand expected for the rest of the year, according to OPEC

2,820

the number of inspections carried out by AMSA during 2021

44%

the drop in bulk carrier orders in the first half of 2022 compared to the same period in 2021

1,230 KM

the length of the Rhine River

$255 MILLION

the value of the most expensive ship ordered in the first half of 2022

58

the number of piracy and armed robbery incidents against ships reported in the first half of 2022

7,000,000 TEUs

the containership orderbook at the beginning of August


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