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8 th Annual Capital Link Operational Excellence in Shipping Forum Best Industry Practices – A Competitive Advantage Tuesday, October 30, 2018 - Hilton Athens Hotel, Athens



PRESS RELEASE

"8TH ANNUAL CAPITAL LINK OPERATIONAL EXCELLENCE IN SHIPPING – BEST INDUSTRY PRACTICES" FORUM "THE SHIPPING INDUSTRY AT CROSSROADS" TUESDAY, OCTOBER 30, 2018 - AT THE ATHENS HILTON HOTEL

November 5, 2018

Capitalizing on the long established track record of organizing highly successful large scale maritime conferences in major industry centers around the world, the <u>"8th Annual Operational Excellence in Shipping – Best Industry</u> <u>Practices" Forum</u> took place on **Tuesday, October 30, 2018** at the **Hilton Athens Hotel** with huge success attracting 570+ participants.

With an 8-year track record it is the only Forum that showcases Operational Excellence in the Maritime Sector that explores Best Industry Practices across all major areas such as fleet management, technological innovation, crewing, energy efficiency and the environment, safety & security.

In **Mr. Nicolas Bornozis'** welcoming speech, he stated that this year's forum focused on "The Industry at Crossroads" as the industry has to decide on specific strategies addressing the challenges ahead. Thus, we focused on three main topics, all of which are game changers for the industry. The first one is the transformational impact of Technology and Digitalization. The second relates to the importance and necessity of Maritime Education. And the third one, to which we devoted the biggest part of the Forum refers to the upcoming Environmental Regulations and how these can impact the shipping industry from an operational, investment and risk/financial viewpoints. We deep dived into the three main areas, Ballast Water Treatment, Sulfur Cap and Decarbonization, as well as the outlook for Marine Fuels.

The Forum featured senior Executives from 29 leading shipping companies, 3 major classification societies (Bureau Veritas, DNVGL, Lloyd's Register), the biggest registry in the world - Liberian Registry, IMO - International Maritime Organization, US Coast Guard, the heads of 4 International Organisations (BIMCO, European Community Shipowners Associations, INTERCARGO, INTERTANKO), International Banks (ABN AMRO and DVB BANK), as well as EXXON MOBIL.

2018 CAPITAL LINK MARITIME CSR LEADERSHIP AWARD

In the context of the Forum the **2018 "Capital Link Maritime CSR Leadership Award"** was presented to **Mr. Philippe Louis-Dreyfus**, Chairman - Louis Dreyfus Armateurs S.A.S.; Former President – BIMCO. **Mr. Panagiotis Laskaridis**, President - European Community Shipowners Associations; CEO - Lavinia Corporation/Laskaridis Shipping Co. Ltd., delivered the Introductory remarks.

Mr. Panagiotis Laskaridis in his speech he stated: "We have gathered here today to honor a close friend for many years. When I first met Mr. Philippe Louis-Dreyfus, I wondered who this guy was, always telling me what is right and what is wrong; now I never open my mouth without asking for his opinion first. He has had two distinguished careers, in both banking and shipping, and is a very accomplished person all around.

Among other distinctions, Mr. Philippe Louis-Dreyfus is *Commandeur* of the *Légion d'honneur* and *Officer of the British Empire*. His honesty and perseverance have left a big impact in shipping and he has many friends in Greece.

Please join me in welcoming Mr. Louis-Dreyfus, a more than worthy recipient of this award."

Mr. Philippe Louis-Dreyfus in his speech he stated: "Greece is traditionally the biggest country in shipping worldwide, given its fleet and presence in all international organizations. Shipping is important in Greece, and Greece is important for shipping. My sincere thanks to Mr. Laskaridis for his kind words, and to the organizers for compliments that are usually only uttered after one's death. Thankfully, I am still very much alive.

Shipping is one of the oldest professions in the world. For me however, it is also the best one. You get to build something solid, lasting, and meet fine, dedicated and passionate people. Shipping is defined by its values: Solidarity and family.

Once again thank you to everyone for this prestigious award."

(*Mr. Philippe Louis-Dreyfus'* full speech is available online at the following link: <u>http://forums.capitallink.com/csr/2018athens/.</u>)

The "Capital Link Maritime CSR Leadership Award" was initiated 6 years ago aiming to recognize a person or an organization for demonstrating the highest level of commitment to Business Ethics and Best Industry Practices. Previous Honorees were Mr. Jeremy Penn, Dr. Nikos Tsakos, Mr. Efthimios Mitropoulos, Mr. Clay Maitland and Mr. John Platsidakis.

INDUSTRY PANEL & PRESENTATION TOPICS

Digitalization & Cybersecurity – Panel Discussion

Technological Innovation - Transforming Shipping **Moderator**: **Mr. Nick Brown**, Marine & Offshore Director – Lloyd's Register **Panelists**:

- Mr. Salvatore d'Amico, Fleet Director d'Amico Societa di Navigazione
- Mr. Andreas Hadjipetrou, Managing Director Columbia Shipmanagement
- Mr. Theofanis Sallis, Head of Operations & Technology Gaslog Ltd
- Mr. Mark Pearson, Managing Director Maran Tankers
- Ms. Despina Panayiotou Theodosiou, Chief Executive Officer Tototheo Maritime Ltd

Mr. Nick Brown, Marine & Offshore Director – Lloyd's Register, stated: "The adoption of digital technologies provides us with the solutions needed to address transparency, information integration, and the collaboration that is required in order to increase the total value production in our industry, to help reduce failure risk, and increase uptime.

There are efficiencies to be gained both at the asset level and the supply chain level – benefitting the owner and operator, as well as the shipyard, designer, equipment manufacturers, suppliers, port and end-customer. For us, it's about a move to more intelligent processes, made possible by digital technologies that optimize systems and people and finding the balance between the adequate level of technology and the necessary level of human activity and the integration of these, will be the critical issue for the post-2020 maritime industry."

Mr. Salvatore d'Amico, Fleet Director - d'Amico Societa di Navigazione, stated: "In d'Amico we strongly believe that Metadata is the right way to proceed in order to reduce the Human Element Risk in the day to day operation of the vessel. Through a responsible use of this technology we can make sea transportation safer and greener. Today the technology is available at the right price it is only a matter to find the best way to use it without aggravating the day to day job of the people on board."

Mr. Andreas Hadjipetrou, Managing Director - Columbia Shipmanagement, stated: "As a ship manager, one encounters different types of clients; traditional ones, not yet decided on whether technology is a blessing or a curse, and clients geared towards technology, willing to invest. At the moment, we are trying to achieve optimal control, by creating reports that include vessel performance, optimization, fuel consumption and more."

Mr. Theofanis Sallis, Head of Operations & Technology - Gaslog Ltd, stated: "As ICT is revolutionizing shipping, there are numerous risks and opportunities that need to be identified and understood. Regarding the first, new technologies must be safely integrated into ship design and operations. Therefore, we continually evaluate the security of our IT infrastructure in order to determine any potential security weaknesses in our offices and onboard our vessels. Areas for improvement are identified and we have also embedded a Cyber Security culture

across our Organization. By investing in digital technologies, we create opportunities that we believe will improve our efficiency and potentially our cost structure. We have also initiated partnerships with key vendors and other stakeholders to ensure we capture the benefits of technical innovation".

Mr. Mark Pearson, Managing Director - Maran Tankers, stated: "Digital transformation is the big word of the day. In my opinion, there's still a long way to go before being able to use big data in a larger scale. Digital transformation is a journey, not something that happens from one day to the next. What we are using now is a common platform for our fleet and offices, fusing data and gathering all of it on the same platform. The biggest challenge remains changing people's mentality about digitalization."

Ms. Despina Panayiotou Theodosiou, Chief Executive Officer – Tototheo Maritime Ltd, stated: "We understand that there are many new ways we can, as an industry, use data to make business improvements. Some of these improvements can be incremental and some disruptive. Data is information, which is intelligence and leads to decision making and improvements. To achieve the best of this we need to ensure the data used and digitalised processes we select are trusted, safe and efficient.

Over 2018 the industry has engaged heavily in cyber security and cyber resilience. Getting this right is as much about the attitudes of the people in an organisation as the programmes, software selected, or the cyber tools deployed."

Connecting Ports, Vessels & People

Presentation by: Mr. Andreas Chrysostomou, Chief Strategy Officer – Tototheo Maritime Ltd

Mr. Andreas Chrysostomou in his speech he stated: "Vessels carry the bulk of the world trade and ports facilitate the smooth transition from sea to shore of the goods carried by vessels. People on the other hand are the necessary actors that are required to operate the ships and the ports in order to complete this enormous and indispensable seamless transition.

Traditionally, this interconnected approach has created conditions for increased employment, prosperity and stability ashore. As we are rapidly approaching the instant gratification inflection point, though, where consumers demand products and services delivered anywhere at any time the concept of connecting vessels, ports and people has to be revamped so that goods and services are delivered in a real-time, all access and at a highly personalised approach."

Innovative Shipyard Solutions

Presentation by: Mr. Charalambos Sarantitis, Technical Director - Newport Shipping

Mr. Charalambos Sarantitis in his speech he stated: "Cyclical industries stress cashflow and for routine dry dockings or ad hoc repairs this also impact a company's ability to operate the vessels efficiently. The shipping industry is not getting easier as the regulatory environment also impacts the technological demands further impacting operational knowledge and financial resource. At Newport Shipping UK LLP we bring together trusted partners including ship yards, engineering firms and competent staff to assist owners manage through the many demands of today and finance the cost to smooth out the cyclicality."

Protectionism – Diversity – Marine Pollution: BIMCO's Strategic Focus Looking Ahead

Presentation by: Mr. Anastassios Panagiannopoulos, President – BIMCO; CEO - Common Progress Co Na SA **Mr. Anastassios Panagiannopoulos** in his speech he stated: "Shipping is in the middle of one of the biggest transitions it has ever confronted. Not just the transition to low sulphur fuel, but a transition into an era with more focus on the environment, and more regulation. It is not an ideal cocktail for the shipowners, facing a tough market, also to face a more unpredictable market with more regulations. But we must do our part to ensure the long-term sustainability of human activity on the planet. We must adapt. We must be curious. And we must invest in new technology and ideas to overcome the challenges ahead."

(*Mr. Anastassios Panagiannopoulos'* full speech is available online at the following link: <u>http://forums.capitallink.com/csr/2018athens/.</u>)

The Evolving Role of Women in Shipping

Presentation by: Mrs. Despina Panayiotou Theodosiou, President – Wista International; Chief Executive Officer – Tototheo Maritime Ltd

Mrs. Despina Panayiotou Theodosiou in her speech she stated: "Diversity is a very important aspect in today's maritime industry. WISTA was founded in the UK 44 years ago and now exists in 46 countries and all continents. Last July, it gained consultant status at the IMO. We are working towards the UN's sustainable goals, and specifically women's empowerment. Women create value in many areas, and WISTA's agenda has evolved beyond gender related issues, trying to create a competitive advantage by making the industry attractive to the best minds, of men and women alike. The progress that has been made is significant, but there is still a long way to go."

Maritime Education – Panel discussion

Moderator: **Professor Constantine Arcoumanis**, ex-Ambassador of Greece for Energy Policy & New Technologies, ex-Vice President - City University of London

Panelists:

- Mr. Leonidas Evgenidis, Chairman Evgenidis Foundation; Maritime Ambassador of Greece to IMO
- Mr. George A. Tsavliris, Principal Tsavliris Salvage Group
- Mr. Dimitris Diamantis, Director General Metropolitan College
- Mrs. Venetia Kallipoilitou, Deputy Managing Director for Human Element and Training Tsakos Columbia Shipmanagement S. A.

Professor Constantine Arcoumanis, ex-Ambassador of Greece for Energy Policy & New Technologies, ex-Vice President - City University of London, stated: "This Maritime Education session, organised for the first time by Capital Link in Greece, is coming at a very critical time for global shipping and Greek shipping, in particular. In addition to the traditional role of education in creating skills for personal and professional success, the emergence of environmental regulations under discussion and implementation by IMO, has introduced the urgent need for technical competencies and managerial skills which are not part of the standard curriculum of Maritime Academies. This session is therefore aiming to highlight the complementary role of public and private marine and maritime education in providing students with the best possible skills and knowledge for a career in shipping as well as the need for nautical schools private or public to feed adequately prepared students to the Maritime Academies. Furthermore, since professional success depends on both quality of education and personal qualities, it is important to identify aspects of the personality, including the role of emotional intelligence, which are emerging as the key personality ingredients for a gratifying maritime career onshore or at sea."

Mr. Leonidas Evgenidis, Chairman – Evgenidis Foundation; Maritime Ambassador of Greece to IMO, stated: "We find ourselves in the middle of a very interesting period, where good practices are more important than ever, and the human factor must have an even greater role. The most important thing to remember is that Greek shipping cannot exist without Greek offices and seafarers. Greek seafarers are not enough to cover the needs. Nautical academies are the key source that supplies us with personnel. However, both there and in the technical lyceums, the level is inadequate, and many graduates do not have the merits to follow a career in shipping. I am committed to contributing in the betterment of maritime education in our country."

Mr. George A. Tsavliris, Principal – Tsavliris Salvage Group, closed the Maritime Education panel with his views on the human and technical qualities expected from the students of the Maritime Academies.

Mr Tsavliris said that acquiring an education is critical for any young person wishing to strengthen his academic profile and expand his knowledge with the theory and technical aspects of the maritime sector. Professional success depends on both quality of education and personal qualities.

Mr Tsavliris stressed that beyond any doubt, the human factor is of vital importance. One's personality is what will make or break a career in this industry. The character traits required in the Maritime industry are not the same as those necessary in other sectors – like any maritime related activity: (1) It is important to be daring, to be decisive, to take risks. (2) to maintain one's idiosyncrasy and mode in handling matters (3) to be charismatic, to expose oneself to life, including its hardships as well as its joys - because it is through hardship, struggle and hard work, and yes making our mistakes - that we learn and grow, and develop as human beings on to the next level.

And (4) emotional intelligence is a key ingredient for a gratifying career in the maritime sector – individuals with strong leadership potential also tend to be more emotionally intelligent, suggesting that a high EQ is an important quality for maritime leaders and managers to have.

Mr. Dimitris Diamantis, Director General - Metropolitan College, stated: "The establishment of the partnership between Metropolitan College of Greece and Solent University of Southampton, the world's premier maritime education and training provider, has been the outcome of extended research and consultation of stakeholders in the maritime industry which has identified an increased demand for well trained and educated seamen. The introduction of this new private Maritime Academy is considered to be complementary to the Public Merchant Marine Academies in Greece rather than antagonistic. This initiative is based on the concept of offering for the first time in Greece a full range of high-quality franchised UK University programmes which provide their graduates with internationally acknowledged undergraduate and graduate degrees in all aspects of marine and maritime education. Metropolitan College has invested in its new campus in the heart of Piraeus both in knowhow and infrastructure in an effort to address issues like safety at sea, high efficiency of navigation and protection of the marine environment. This effort embraces the challenges of an ever-changing world by offering a blended student experience which combines hands-on vocational training with academic knowledge, ethos and professional competence relevant to the needs of the global maritime industry".

Mrs. Venetia Kallipoilitou, Deputy Managing Director for Human Element and Training - Tsakos Columbia Shipmanagement S. A., stated:

"The time has come! The maritime education should be introduced to our schools"

"Capta Panagiotis Tsakos said few days ago, with all the strength of his voice and soul, "it's time to stop believing in an utopia. If we want to maintain for the new generations our sea DNA, of our seamanship and maritime tradition, the next time that we will meet as shipping community, the room should be full of teenagers and young people, students of high schools and cadets".

With these words and with the eyes to the future a private nonprofit nautical high school has been established and started his educational work in September 2018 in Chios island, offering, among others, marine and maritime education and training.

The maritime present is totally different from the past. In a very demanding and challenging maritime environment what is really needed is to embrace the whole educational chain by starting from the schools, building upon the culture, of how to become familiar with the sea and the vessels and by demonstrating the perspectives of a maritime career and the traditional principles of the seamanship. Shipping and the whole

maritime cluster could give an enormous boost to reduce unemployment and this is a fact that cannot be disregarded nowadays.

Education is not a competitive arena. Institutional Maritime Organisations, Maritime oriented Foundations and shipping shareholders could contribute to the necessary modifications of international and national legislation to address an open system complementary to the public maritime education. After all the sea can hold us all."

ENVIRONMENTAL REGULATIONS & THE INDUSTRY'S RESPONSE

Are Regulations Addressing the Real Problems in Shipping?

Presentation by: Mr. John Platsidakis, Chairman - INTERCARGO; Managing Director – Anangel Maritime Services Inc.

Mr. John Platsidakis in his speech he stated: "Ocean going tramp shipping, a mostly stateless business sector, is constantly overwhelmed by regulations.

174 member states at IMO, most of which have very swallow knowledge of ship operations and indifferent invested interests in the sector, are constantly regulating with the objective of pleasing the unaware public, the environmental NGOs and the media.

We should all do our best to make the public and the various politicians and regulators aware of how our industry works and explicitly tell them that we welcome good and practical regulations which improve ship operations and safe guard the environment, the safety of the ships, their crews and their cargoes."

(Mr. John Platsidakis' full speech is available online at the following link: <u>http://forums.capitallink.com/csr/2018athens/.</u>)

An Update on Implementation of U.S. Ballast Water Regulations

Presentation by: Commander Nathan Menefee, Deputy Director of Inspections and Compliance - US Coast Guard **Commander Nathan Menefee** in his speech he stated: "The United States is without a doubt now in compliance mode, fully enforcing the U.S. ballast water standards. While the Coast Guard recognizes the challenges and complexities new systems can bring to vessel operations, vessel operators do have a key role to play to ensure their vessels can achieve and remain in compliance with U.S. and international requirements.

There is no single magic solution to the challenges of ballast water compliance; therefore, vessel operators must have a strategy to address these challenges directly in order to avoid potential delays and penalties.

Operators who have delayed or put off determining their compliance strategy with the U.S. or IMO Ballast Water Standards are increasingly navigating into danger due to the significant backlog of installations that must occur in between 2021 and 2023."

Ballast Water Treatment - Panel Discussion

Moderator: **Dr. Michalis Pantazopoulos**, Managing Director – Liberian Registry – LISCR (Hellas) S.A. **Panelists**:

- Mr. Lee Adamson, Head, Public Information Services IMO
- Commander Nathan Manafee, Deputy Director of Inspections and Compliance US Coast Guard
- Mr. Konstantinos Stampedakis, Managing Director ERMA FIRST ESK Engineering Solutions S.A.
- Mr. Loukas Barmparis, President Safe Bulkers

Dr. Michalis Pantazopoulos, Managing Director – Liberian Registry – LISCR (Hellas) S.A., stated: "As the Ballast Water Management Convention has been in implementation as well as compliance mode by both the IMO but also the USCG who is also fully enforcing the US ballast water standards, some of the challenges and complexities of the ballast systems installed onboard remain. The systems compatibility with the IMO standards but also the USCG standards that are different present a challenge for ship operators trading worldwide including the USA ports. Several issues were addressed on the IMO's and the USCG's compliance and enforcement, ballast systems malfunctions, ship operations and potential delays. The early conclusions of the undergoing Experience Building Phase on ballast systems onboard performance were discussed. Suggestions and recommendations to ship operators on ballast system acceptance on newbuilding vessels were offered by IMO and the USCG. Ballast water systems continue to be evolved and developed to meet all required standards."

Mr. Lee Adamson, Head, Public Information Services - IMO, stated:

"Ballast water management"

"The spread of invasive aquatic species has been recognized as one of the greatest threats to the ecological and economic wellbeing of the planet. These species are causing enormous damage to biodiversity and the valuable natural riches of the earth upon which we depend. Direct and indirect health effects are becoming increasingly serious and the damage to the environment is often irreversible. By requiring shipping, through a process of international regulation, to actively manage its ballast water, IMO tackling this important environmental issue and making a very positive contribution to environmental protection and bio-diversity."

Commander Nathan Manafee, Deputy Director of Inspections and Compliance - US Coast Guard, stated: "We do recognize that systems do malfunction sometimes. There was a policy letter issued, detailing some situations that vessels could face and providing some guidance to the owners and the port personnel. The key part is to notify the authorities early, and the operator needs to be able to prove that proper maintenance was taking place. The industry needs to cooperate in order for these issues to be resolved, providing for example their systems' designs to others."

Mr. Konstantinos Stampedakis, Managing Director - ERMA FIRST ESK Engineering Solutions S.A., stated: "Following hundreds of our systems' installations on new builds and retrofits, we have moved from an era of uncertainty era to that of experience gain.

The focus on systems installation, on crew training and on the development of practical contingency measures have been identified as the most important compliance ensuring factors. The recognition of the chosen BWTS vendor as a long-term partner and not just as an equipment supplier is another outcome of this new era."

Mr. Loukas Barmparis, President – Safe Bulkers, stated: "We at Safe Bulkers being always in the forefront of all technological and environmental developments, having the certification of environmental standard ISO 14001 and the Energy Efficiency Standard ISO 50001, we are installing in all our ships Erma First, a BWTP approved by the IMO and USCG. This will allow us to perform unobstructed world trade including USA."

IMO 2020 – Low Sulfur Cap Compliance: Options, Strategies & Economics - Panel Discussion

Moderator: Dr. George Dimopoulos, Principal Research Engineer - DNV GL Panelists:

- Mr. Lee Adamson, Head, Public Information Services IMO
- Mr. Mikhail Shapiro, Global Head of Marine Fuels and IMO 2020 Implementation Glencore Energy UK
 Ltd
- Mr. Keith Dawe, Senior V.P., Assets and Structuring Manager Cargill Ocean Transportation
- Mr. Dimitrios Vastarouchas, Deputy Chief Operating Officer Danaos Corporation
- Mr. Stamatis Bourboulis, General Manager Euronav Ship Management (Hellas) Ltd
- Mr. Loukas Barmparis, President Safe Bulkers
- Mr. Nicos Rescos, Chief Operating Officer Star Bulk Carriers

Dr. George Dimopoulos, Principal Research Engineer - DNV GL, stated: "The global sulphur cap is entering into force in 2020. The industry is evaluating its options and has to navigate to the new regulatory regime. Owners must evaluate and select the appropriate technologies, ranging from compliant fuels to scrubbers. The technical, installation, maintenance and operability aspects play a dominant role, depending on ship type, size and trading. At the same time, charter party agreements will change and various legal and insurance aspects need to be accounted for. These have a significant impact on the financial bottom line of ship operations, both on the financing side and the charter rates premiums. Our panel, represented by different stakeholders of the maritime industry, debated current options and highlighted strategies for adapting to the new regulatory reality."

Mr. Lee Adamson, Head, Public Information Services - IMO, stated:

"Low-sulphur fuel"

"IMO regulations to reduce sulphur oxides (SOx) emissions from ships first came into force in 2005 and have been progressively tightened. Limiting SOx emissions reduces air pollution and results in a cleaner environment. From 1 January 2020, the limit for SOx in fuel oil used on board ships (outside designated ECAs) will be reduced to 0.50% m/m. A 2016 study on human health impacts estimated that by not reducing the SOx limit for ships from 2020, air pollution from ships would have contributed to more than 570,000 additional premature deaths worldwide between 2020-2025. So, the reduction in the limit for sulphur in fuel oil used on board ships under so-called IMO2020 will have major health and environment benefits, particularly for populations living close to ports and major shipping routes."

Mr. Mikhail Shapiro, Global Head of Marine Fuels and IMO 2020 Implementation – Glencore Energy UK Ltd, stated: "It is important to understand how the supply chain works. Compatibility is never guaranteed, not even now. In my opinion, the focus shouldn't be on the number of scrubbers but in the vessel's efficiency instead. There is consensus that availability is sufficient, but success still depends on fuel management. So, ask yourselves: Who are you buying fuel from? What sort of relationship do you have with them? Purchasing fuel, a year before the regulations is difficult, but at the same time, the sooner you are prepared, the better."

Mr. Keith Dawe, Senior V.P., Assets and Structuring Manager - Cargill Ocean Transportation, mentioned that flexibility requires planning and lots of work - working with fuel suppliers, testing their product both in labs and aboard the vessels. The fastest way to ensure compatibility is to avoid blending fuels in the first place. Cargill also helps owners prepare for the transition period, where vessel selection will be more important than ever.

Mr. Dimitrios Vastarouchas, Deputy Chief Operating Officer - Danaos Corporation, stated: "Approaching the IMO 2020 new sulfur cap's implementation date, shipping companies realized that there exists ambiguity as to the HFO availability for the next decade, expected price difference among alternative fuels, the retrofits to take place and the new designs to dominate the market. Decisions about the way to move forward have to be taken, either

on a speculation or on a long term charter basis, while same are associated with high cost investments and rather uncertain results. Therefore, technical & operational flexibility, have to be thoroughly analyzed, in order to provide customized solutions covering most popular market trends, including scrubbers or ULSFO, blended or straight runs, and in some particular cases LNG option too."

Mr. Stamatis Bourboulis, General Manager - Euronav Ship Management (Hellas) Ltd, stated:

"IMO 2020 – Low Sulphur Cap Compliance: Options, Strategies & Economics

"The new regulations although primarily aiming simply to impose a global Sulphur cap to the marine fuels, have in practice uncapped an unprecedented global debate in the marine industry in relation to the choice of the method of compliance, due to their double faced nature of allowing to continue the use of high Sulphur fuels by the installation of scrubbers.

I believe that the method posing the least environmental and safety risks, technical and operational challenges, compliance and conformance issues, but also the least economic investment uncertainty is the choice of using compliant Low Sulphur Fuel Oil."

Mr. Loukas Barmparis, President – Safe Bulkers, stated: 'IMO, through regulations, has tried to align shipping with others economic sectors. At Safe Bulkers, given the fact that from January 1st the regulations will be implemented, and that March 1st marks the ban of non-compliant fuels, we have tried to determine our course of action. We did our homework and decided to install scrubbers on half our fleet and use low sulfur fuels for the other half. We believe this 50-50 strategy will help with reducing SOX emissions, which is the main goal.'

Mr. Nicos Rescos, Chief Operating Officer – Star Bulk Carriers, stated: "Star Bulk is committed to the timely and effective enforcement of the IMO 2020 regulation and considers the recent adoption of the non-compliant fuel oil carriage ban by the IMO as an important step towards this direction. We support the use of low sulphur MGO, on which the industry has been operating reliably in ECA zones since 2005, as well as the use of environmentally sound exhaust gas cleaning systems as equally effective methods towards compliance with the new sulphur standards as of 1 January 2020."

Decarbonization – 2020 Marine Fuels & Beyond - Panel Discussion

Moderator: Dr. John Kokarakis, Vice President, Technology & Business Development, Hellenic, Black Sea Region & Middle East – Bureau Veritas Marine & Offshore Division Panelists:

• Mr. Lee Adamson, Head, Public Information Services - IMO

- Mr. Antonis Trakakis, Technical Director Arista Shipping
- Mr. Panos Zachariadis, Technical Director Atlantic Bulk Carriers Management Ltd.
- Mr. Bill Stamatopoulos, Business Development Manager, SE Europe Verifuel
- Mr. Kostas G. Vlachos, Managing Director Consolidated Marine Management Inc. & COO Latsco Shipping

Dr. John Kokarakis, Vice President, Technology & Business Development, Hellenic, Black Sea Region & Middle East – Bureau Veritas Marine & Offshore Division, stated: "In April 2018, IMO has established the road map for the reduction of carbon dioxide emissions, setting specific ambitious targets until 2050. CO2, a GHG gas and main contributor to global warming has been targeted. Our panel was formed aiming to study the necessary strategy and alternative fuels in what appears to be a multi-fuel society. Fossil fuels, the main feedstock of the present are destined to extinction. Even the celebrated LNG fuel does not fill the bill having significant GHG impact. An obvious question is who will pay for all these changes. The issue at hand is not simply technical, but also economic and political."

Mr. Lee Adamson, Head, Public Information Services - IMO, stated:

"Greenhouse gas emissions"

"In 2012, international shipping was estimated to have contributed about 2.2% to the global emissions of carbon dioxide (CO2). IMO has been energetically pursuing the limitation and reduction of greenhouse gas (GHG) emissions from international shipping, in recognition of the magnitude of the climate change challenge. The adoption of the Initial IMO Strategy on Reduction of GHG emissions from ships in April this year is a historic

milestone and should send a strong signal to the shipping sector as a whole to stimulate investment in the development of low- and zero-carbon fuels and innovative energy-efficient technologies."

Mr. Antonis Trakakis, Technical Director - Arista Shipping, stated: "Shipping is one of the industry sectors required to invest and adopt measures that will effectively reverse the slope of emission generation, towards a more sustainable future.

And although engineers in shipping are working intensively in this direction, there is an apparent lack of incentives for shipowners, which if not encouraged to invest in modern approaches and technologies, the ambitious environmental targets will simply never be met.

Decarbonization is certainly the biggest problem of shipping. Far more difficult than 2020, but it is a global problem, not only of shipping.

And as shipping will share solutions with other industries and the society, in same manner the costs involved and benefits expected, have to be shared globally as well."

Mr. Panos Zachariadis, Technical Director – Atlantic Bulk Carriers Management Ltd., stated: "Most "alternative" fuels are being promoted as "clean burning". This may be true for their emissions affecting human health (SOx, NOx and PM) but not for their GHG/CO2 emissions. Most recent studies are strongly challenging the "green" picture of such fuels. The lifecycle environmental footprint of nearly all proposed "alternative" marine fuels is very poor and, in most cases, worse than the current conventional liquid fuels (IFO, MGO). Thus their consideration as being "transitional" or "bridge" fuels towards decarbonization should be seriously questioned. It would be unfortunate if regulators, in their urge to act, promote fuels with worse lifetime GHG effects than current conventional fuels."

Mr. Bill Stamatopoulos, Business Development Manager, SE Europe - Verifuel, stated: "Bio-derived fuels and their blends with petroleum products are potential alternative energy sources since they are renewable and can result in reduced greenhouse gases and sulphur emissions.

The term 'fuels' used to be a homogeneous blend of hydrocarbons derived from petroleum refining. However, ISO 8217:2017 define fuels as hydrocarbons from petroleum crude oil, oil sands and shale; hydrocarbons from synthetic or renewable sources, or blends with fatty acid methyl esters.

To achieve the target of a more sustainable footprint, measures may include alternative fuels, carbon pricing and new shipbuilding rules, considering at the same time mitigation measures to ease the financial burden."

Mr. Kostas G. Vlachos, Managing Director - Consolidated Marine Management Inc. & COO - Latsco Shipping, stated: "In the efforts that are made for reducing the Greenhouse emissions produced by shipping the alternates fuel such as it is the LPG will play a very significant role. It is not only that the LPG meets fully the SOx requirements, but it reduces the CO2 emissions by around 18% compared with HFO and on top of that by using LPG as the primary fuel means a reduction of EEDI of up to 13% or up to 20% higher engine power with retained EEDI. Last but not least, using LPG as a fuel, limits the risk of oil spills, especially important when operating in sensitive areas."

IMO 2020 & Marine Fuels – An Oil Major's Viewpoint

Presentation by: Mrs. Armelle Breneol, Senior Marine Fuels Technical Advisor - ExxonMobil Marine

Mrs. Armelle Breneol in her speech addressed the International Maritime Organization's (IMO) 0.50 per cent sulphur cap, requiring vessels to make a permanent, global change in fuel selection, unless operators opt to fit abatement technology.

This will necessitate the development of new low-sulphur fuel formulations, which in turn will require the use of low BN cylinder oils. In order to safely navigate these changes, ExxonMobil recommends that vessel operators start planning their bunkering operations well in advance of the IMO deadline and develop a fuel management strategy for 2020 and beyond.

Without prudent plans in place, operators run the risk of non-compliance and costly fines.

IMO 2020 – Risk, Finance & Insurance Implications

Moderator: Mr. Nikolaos Michas, Technical Service Manager – DNV GL – Maritime Region South East Europe & Middle East

Panelists:

- Mrs. Danai Kotsia, Business Manager & Director Transportation, Global Transportation & Logistics ABN ٠ **AMRO Bank**
- Mr. Dimitrios Panagopoulos, Managing Director, Shipping Finance Greece DVB Bank
- Mr. Ilias Tsakiris, CEO The American Hellenic Hull Insurance Company
- Mr. Cem Saral, CEO Cockett Marine Oil

Mr. Nikolaos Michas, Technical Service Manager – DNV GL – Maritime Region South East Europe & Middle East, stated: "A major concern for all shipping companies today is what decisions they will make so as to comply with IMO2020, how they will finance these decisions and what are the underlying risks. Financial institutions, insurance companies and bunker suppliers will be the key players that will drive the Maritime Industry to the New Era.

The Risk, Finance & Insurance Implications panel focused on critical questions such as:

- What is the role of financial institutions on the new regulatory environment and how the rule's implementation may affect financial institutions' decisions?
- What are the industries' initiatives to support a sustainable future in shipping?
- What are the legal consequences and insurance complications due to non-compliance?

How will refineries and bunker suppliers be prepared to supply the market with the required Fuel?"

Mrs. Danai Kotsia, Business Manager & Director Transportation, Global Transportation & Logistics - ABN AMRO Bank, said that: "In a volatile world market, a bank with global presence and staying power is rare. ABN AMRO has been financing this sector since 1720. Many clients have been with us for decades because our support goes beyond dollars. A stable team of sector specialists with the experience to advise you on funding diversify cation and strategic capital management; we offer a complete product range and the industry know-how to develop creative solutions.

Add fast decision-making, flawless execution, and integrated risk and portfolio management, and you can see why companies tend to stay with us for the long haul. For more on how our Transportation & Logistics team could support your business, visit abnamro.com/etc."

Mr. Dimitrios Panagopoulos, Managing Director, Shipping Finance Greece - DVB Bank, stated: "The implementation of IMO 2020 has created a situation where market participants are positioning to reduce their risks. The great uncertainty created is visible in the plethora of opinions regarding the way forward. The focus has turned to scrubbers -the installation of which may provide an advantage for at least a short period of time. Financiers also need to navigate on unchartered territory. The green credentials may provide a boost to the financing of scrubbers - or to vessels fitted with scrubbers but it is too early to tell the wider impact on Shipfinance."

Mr. Ilias Tsakiris, CEO – The American Hellenic Hull Insurance Company, commented on insurance issues arising from new IMO regulations to mitigate climate change, including implementing the 0.50% sulphur limit for marine fuels to be enforced from January 1st 2020.

Although the regulation is a positive move towards reducing pollutant emissions from the maritime industry, Mr. Tsakiris stressed that there is still uncertainty about whether the new environment could lead to instances of machinery damage caused by incompatible or adulterated fuel use.

"Non compliance with the 2020 IMO regulation implies that if the vessel does not comply with the requirements of the Marpol Convention it may lose the flag state convention certification status.

"Therefore, a vessel's insurance cover might be threatened," said Mr. Tsakiris.

"The marine insurance industry is closely following these developments and we wish to draw this to the attention of all parties concerned," he told delegates to the conference.

Mr. Cem Saral, CEO – Cockett Marine Oil, stated: "We have a wide variety of suppliers and end users, and each one has a different approach on how to cope with the IMO2020 regulations. Often the views are conflicting, and the response differs per individual, depending on geography and capacity. We expect the cost of oil to rise,

which will impact the supply chain, but there definitely will be many shifts to come, in the balance between supply and demand."

Keeping Our Eye on The Ball: Shipping & The Environment - A Realistic & Practical Approach

Presentation by: Mr. George Procopiou, Founder – Dynacom Tankers, Sea Traders - Dynagas

Mr. George Procopiou in his speech he stated: "I would like to touch on the issue of IMO's 2020 sulfur cap; the use of low sulfur fuel or the use of scrubbers. The concept is wrong, diverting the pollution from the air to the sea is not progress. The correct approach should be not to create this pollution in the first place. In parallel with the solutions of A) utilizing low sulfur fuel – if available, or B) installing scrubbers – again, if available (as the existing capacity and means can accommodate the instalment of scrubbers to only 6%-8% of the world fleet by 2020) – I propose another solution C) slow steaming. From the very first day of its implementation slow steaming reduces fuel consumption by 60%. This means 60% less CO2, NOx, SOx, and particles, taking into account the extra shipping that is needed – detailed calculations are available. In the meantime, engine builders and shipyards should be given a reasonable period of time to come up with designs that meet the required new standards."

Quo Vadis? – The Industry at Crossroads

Presentation by: Mr. Nikos Tsakos, Chairman – INTERTANKO; President & CEO - Tsakos Energy Navigation

Mr. Nikos Tsakos in his speech he stated: "Mr. Procopiou's idea about slow steaming could be correct, it just has not been as supported by lobbies as other ones have been. At the IMO's meeting there were countries pushing for the regulations to be delayed until 2025, but there was little talk of slow steaming.

From our side, 2020 should be a refinery problem, not a maritime problem. We are the users, and we are being treated like guinea pigs, having those measures thrown at us. We have been asking the IMO for a practical period to test the new fuels, but it has not been accepted yet.

Lastly, let us not forget that Greece has a larger vested interest in the matter, compared to other countries."

Challenges for European Shipping in a Changing World

Presentation by: Mr. Panagiotis Laskaridis, President – European Community Shipowners Associations; CEO - Lavinia Corporation / Laskaridis Shipping Company Ltd.

Mr. Panagiotis Laskaridis in his speech he stated: "In essence the speech will center on the different understandings of the term shipping between Europe and Greece.

More importantly, it will outline the general situation in Europe and highlight the importance of the European deepwater tramp fleet, amounting to more than 40% of the world's carrying capacity, as Europe's only important strategic asset of worldwide importance and which can project Europe's strategic position in the world."

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Founded in 1995, Capital Link is a New York based investor relations, financial communications and advisory firm with a strategic focus on the maritime, commodities and energy sectors, MLPs, as well as Closed-End Funds and ETFs. Based in New York City, Capital Link has presence in London, Athens & Oslo. Capital Link is a member of the Baltic Exchange and works very closely with the New York Stock Exchange, NASDAQ and the London Stock Exchange as well as with major international and supranational organizations and industry associations in the areas of the firm's strategic concentration.

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the organization of corporate events. Capital Link is also known for the organization of large scale, high quality Investment Forums focusing on maritime transportation and U.S. investment products in key industry centers, such as New York, London, Athens, Limassol, Shanghai, Singapore and as of this year in Tokyo. We organize twelve to fourteen conferences annually, of which seven are focused on the maritime sector. The Capital Link Investment Forums feature industry leaders and draw the elite of the global financial and investment communities. The Capital Link brand is widely-recognized and valued worldwide by participants in these communities for combining rich informational and educational content with as well as superior networking opportunities. In addition to conferences, Capital Link organizes Webinars focusing on investment strategies, sectors, critical topics of interest to the investment community and company presentations. Capital Link's global marketing platform enhances the visibility and reach of these events on a global scale that lasts well beyond the date on which each event is held, becoming a continuous reference point for market participants.

Capital Link's efforts have been recognized by the 2011 Lloyds's List Greek Shipping Awards, in 2012 and 2013 by the InterContinental Finance Magazine and in 2016 by the Wealth & Finance Magazine, Also, by the International Propeller Club of the United States and AHI-American Hellenic Institute.