

NAFTIKA CHRONIKA | Triannual English Edition

- To scrub or not to scrub? A billion-dollar question
- INTERCARGO: Safeguarding the interests of dry cargo vessel owners and quality shipping
- Global Warming: A review of Alternative Marine Fuels

- THE GREEK PARADIGM: Nektarios Santorinios and Christos Lampridis talk to *Naftika Chronika*
- Risks and challenges for the global marine insurance market
- Balloon Payments: Opportunities for owners and/or threat to the industry

Issue No: 214
— II.2018
naftikachronika.gr



ISSUE SPONSOR





# Safety Means the World to Us 99

GasLog's reputation has been earned as one of the world's leading owners, operators and managers of LNG Carriers. As each ship leaves port we are keenly aware of our responsibility toward ensuring the safe passage of our people, our cargoes and our environment.

Our attention to detail is a reflection of our company's values and a demonstration of our dedication.



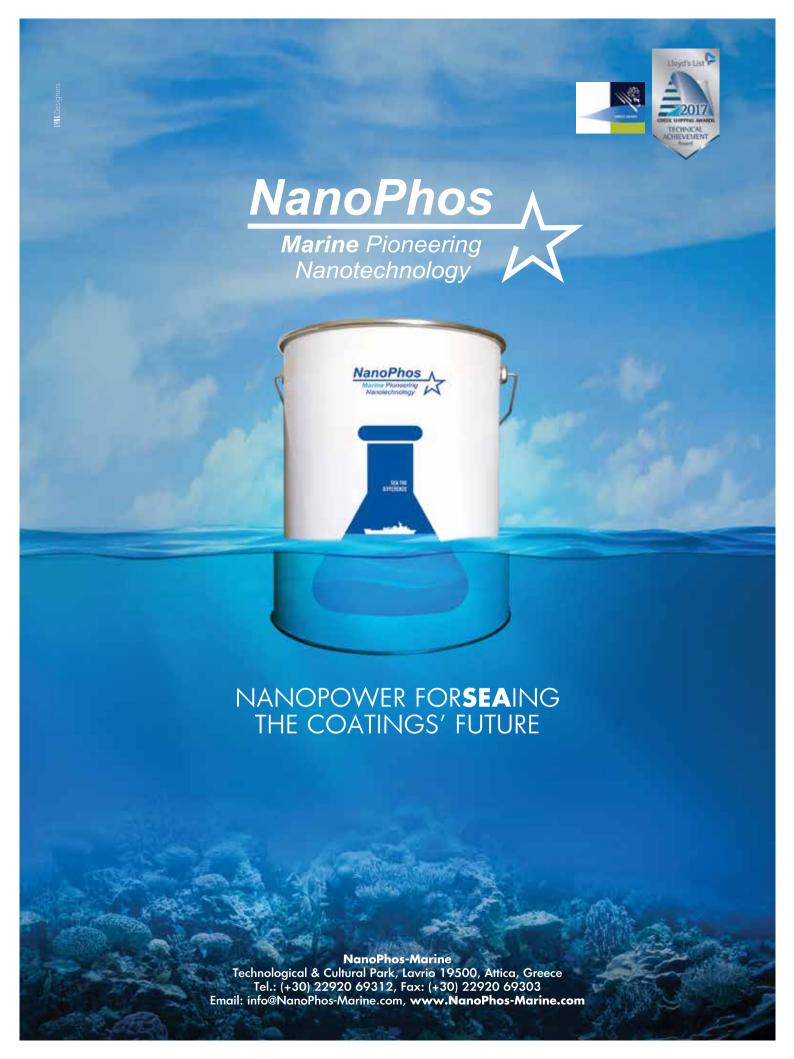




Marine Chemicals & Equipment Gases & Refrigerants Fire, Rescue & Safety Services













TMS TANKERS LTD

OMEGA BUILDING, Λ. Κηφισίαs 80, Μαρούσι 151 25 Τηλ.: 210 8090164, 210 8090113 E-mail: crew@tms-tankers.com

TMS CARDIFF GAS LTD

OMEGA BUILDING, Λ. Κηφισίαs 80, Μαρούσι 151 25 Τηλ.: 210 8090232

E-mail: crew@tms-cardiffgas.com



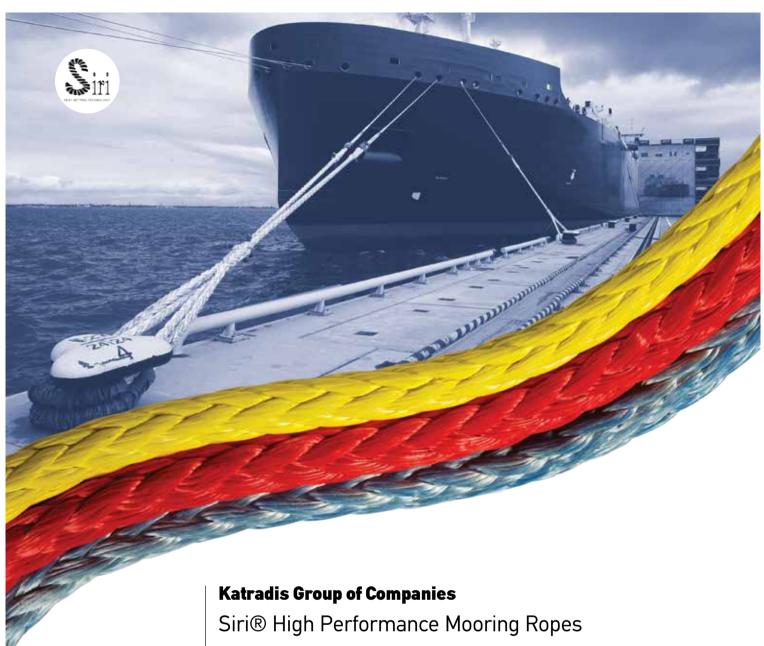
Με σύγχρονο στόλο Δεξαμενοπλοίων και Υγραεριοφόρων (Tankers, LNGCs  $\otimes$  LPGs) προσφέρουμε

- Υψηλά μισθολόγια
- Επιδόματα
- Συνεχή εκπαίδευση

και εξασφαλίζουμε σε Έλληνες Αξιωματικούς καριέρα στην θάλασσα και στην ξηρά.

#### Το μέπλον είναι TMS TANKERS - TMS CARDIFF GAS





# **Performance** to the maximum!

For Your Safer-Stronger & Simpler Mooring Operation



KATRADIS GROUP OF COMPANIES

UHMWPE, Aramid & Mixed Ropes for LNG / LPG Carriers and Tankers Steel Wire Ropes - Sacrificial Anodes - Anchors & Anchor Chains Port Development Equipment - Vessel Deck Equipment

11, Psaron str., 186 48 Piraeus, Greece, T: +30 2104060300

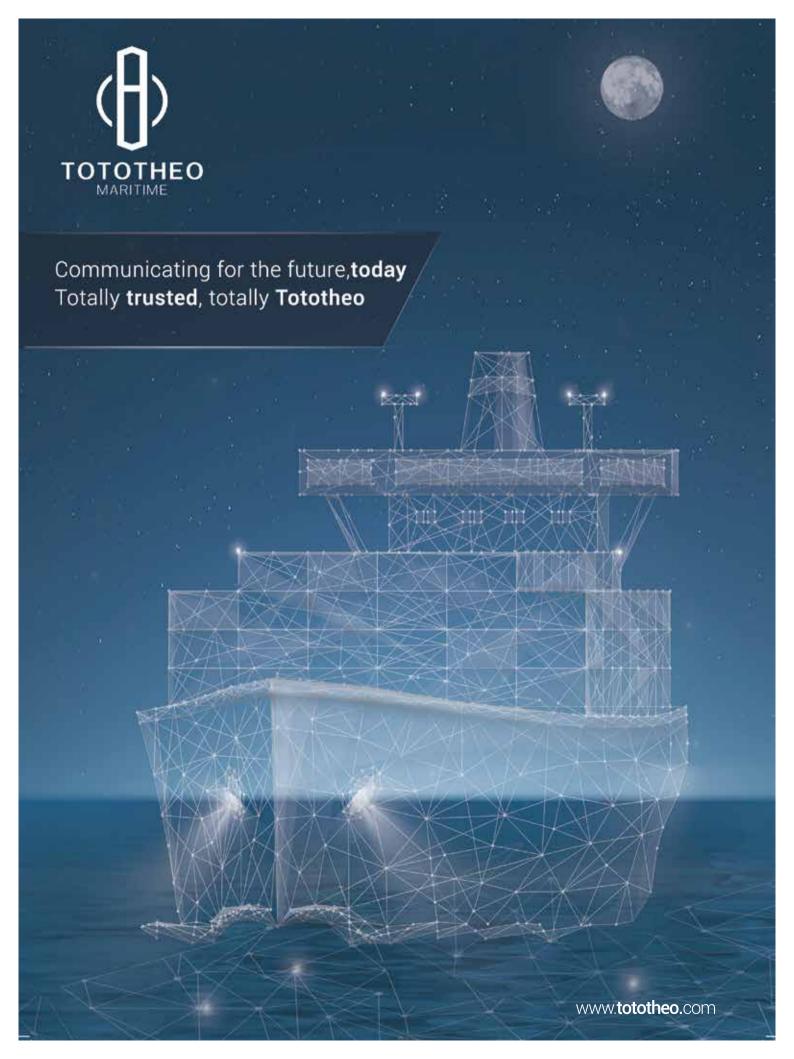
F: +30 2104626268 & +302104619631 E: info@katradis.com - www.katradis.com













# Andriaki Shipping Co. Ltd



# "BE OUR PARTNERS IN SAFETY AND IN OUR QUEST FOR EXCELLENCE"

- Long Tradition
- Modern Fleet of Tankers
- Strong commitment to our people
- O The right choice for a successful career at sea

Learn more/ Send your CV to: www.andriaki.gr 9, Fragoklissias str, 151 25 Maroussi, Greece Tel: 2106152300 / 2106152400

**Published by** Gratia Publications I.K.E.

> **Executive Director** Ilias Bissias

> > **Chief Editor**

Dr Panagiotis Kapetanakis

#### **Scientific Associates**

Panos Zachariadis Rear Admiral (Ret.) Michalis Malerbas

> Commercial Manager Chris Kapadais

**Advertising Manager** Demetra Tsakou

**Corporate Communications** & Special Reports Editor Charis Pappas

> **Assistant to Chief Editor** Angeliki Koliomichou

**Market Analyst** Giannis Theodoropoulos

#### **Special Contributors**

Capt. George Georgoulis Nikos Vergounis

#### **Creative Directors**

Panos Papanagiotou Pandora Giamalidou

> **New Media** Ilias Stefanidis

> > **Photos**

ΑΠΕ/ ΜΠΕ/ ΕΡΑ Pixabay

#### **Gratia Publications I.K.E.**

132 Syggrou Ave, II7 45 Athens T: 210-92.22.501 / 92.48.006 F: 210-92.22.640 info@gratia.gr

www.naftikachronika.gr

Web strategy development by ITBOX

While every effort has been taken to ensure the accuracy of the information contained in this magazine, no responsibility can be accepted for errors, omissions or inaccuracies. Opinions expressed herein are those of the authors and are not necessarily those of Gratia Publications I.K.E. Reproduction in whole or in part is prohibited without the prior written permission of the publisher.

CODE

#### Cover:



The fully electric RoPax vessel Gloppefiord that serves on a popular fjord ferry line in Norway is operated by Fjordl and started its journeys in January 2018.

SPONSOR

November 2018 Special triannual English edition MARICHEM MARIGASES WORLDWIDE SERVICES

Maritime numbers

Europe is being tested. What does the future hold?

By Ilias Bissias and Charis Pappas

**Eradicating poverty by 2030.** Is this target feasible?

By Angeliki Koliomichou and Giannis Theodoropoulos

MARITIME POLICY: THE GREEK PARADIGM Greek islands are a basic piece of our cultural, economic and social web

An interview with Nektarios Santorinios

**PORT POLICY: THE GREEK PARADIGM** The end of the stability support programme period marks a new era for Greek ports An article by Dr. Christos Lampridis

Trains and transport infrastructure in the Balkans: An era of great developments An interview with Philippos Tsalides

**HEADLINING STORY** To scrub or not to scrub?

> Thoughts and concerns of the shipping industry about this billion-dollar question

- Dr. George A. Gratsos
- Stamatis Bourboulis, Euronav Ship Management (Hellas) Ltd.
- Stavros Hatzigrigoris, Maran Gas Maritime Inc.
- Takis Koutris, Roxana Shipping S.A. & Kristen Marine S.A.
- Menelaos A. Pangalos, Chios Navigation (Hellas) Ltd.
- Basil Sakellis, Alassia NewShips Management, Inc.
- · Carl Schou, Wilhelmsen Ship Management
- Dimitrios Heliotis, Target Marine S.A.
- Panos A. Kourkountis, Sea Traders SA
- Costas Stavropoulos, "K" Line LNG Shipping (UK) Ltd.
- Ioannis Chiotopoulos, DNV GL Maritime
- Stamatis Fradelos, ABS
- Dr. John Kokarakis, Bureau Veritas
- Theodosis Stamatellos, Lloyd's Register
- Spyridon Zolotas, RINA

**Global Warming:** A review of Alternative Marine Fuels By Panos Zachariadis

**VESSELS OF THE FUTURE** Life onboard a fully electric RoPax ferry By Ilias Bissias and Charis Pappas

Management skills are the most important asset for a shipowner

An interview with Vincenzo Onorato

**Celestyal Cruises continues to invest** in the Greek market

An interview with Chris Theophilides

**INTERCARGO - ANNUAL GENERAL MEETING** 

Safeguarding the interests of dry cargo vessel owners and quality shipping

Marichem Marigases launches innovative fuel oil treatment products in response to the increasing needs of the maritime market

An interview with Matthew More, Environmentalist

84 Balloon Payments in the shipping industry: Opportunities for owners and/or threat to the industry

- Dario Bazargan, SEA Europe
- Yannis Syrigos, Iolcos Hellenic Maritime Enterprises
- Risks and challenges for the global marine insurance market
  - Ieronymos Bikakis, Hill Dickinson International
  - Dr. Nicholas Berketis, J. Kouroutis & Co. Ltd.
- ACCA, the world's most forward-thinking professional accountancy body Emmanuel G. Kapizionis, Chair of ACCA Member Advisory Committee for Greece

MARINE TECHNOLOGY A new era for Greek Marine Technology

- Elias Hajiefremidis, WIMA
- Stavros Kassidiaris, Ecomasyn
- Helen Polychronopoulou, HEMEXPO
- Konstantinos Kalogeropoulos, Hellenic Institute of Marine Technology

**NEWBUILDINGS** 

Sea Pioneer Shipping Corporation: MV Audacity

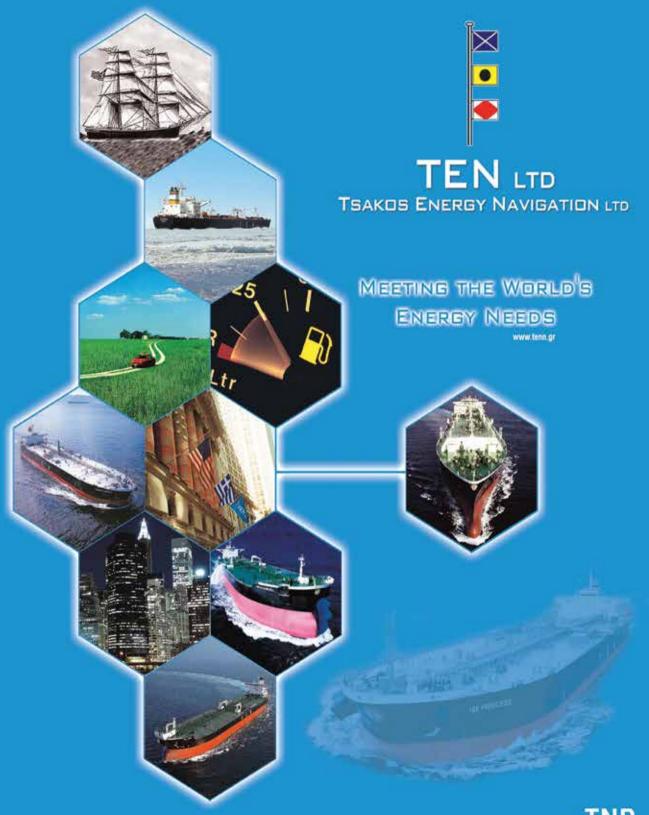
**EUROPEAN SHIPBUILDING INDUSTRY** Trends and challenges for the European

- Carlos de Vliegere, Damen Shiprepair & Conversion
- Richard Beards, Gibdock
- Angelos Phokas, Multimarine Shipyards Ltd -Multimarine Services Ltd
- Resolve Marine Group expands in Alaska
- **Marine Analysis Software Solutions: Introducing Herbert-ABS** By Panos Roussos
- Prevention at Sea developing widely recognised maritime software products By George Ellinas
- **MARKET NEWS**
- Are seafarers happy at work? By Charis Pappas
- **Greek Maritime Golf Event: The meeting point** for the Greek shipping community





# 25 YEARS OF CONTINUOUS GROWTH













### MARITIME NUMBERS

## 450

the number of vessels that have had scrubbers installed, which, according to BIMCO, is less than 1% of the global merchant fleet of around 60,000 ships.

# 2,075,548 TEUs

the container throughput at Piraeus Container Terminal S.A. in the first half of 2018 (an 18.4% increase compared to the corresponding period last year).

## 13 million tons

the plastic waste that enters the oceans each year and threatens marine ecosystems and the people who depend on them.

## € 700,000,000

the construction cost of the cruise ship "AIDAnova", which can accommodate 6,600 passengers.

## 4.6 million

the gross tonnage of the 140 German vessels bought by Greek ship-owners and operators since 2015, according to the German Shipowners Association (July 2018 data).

## 5%

the increase in the total number of incidents (piracy and armed robbery) reported in Asia from January to August 2018 compared to January-August 2017.

## 1,119

the number of students (Deck Officers and Engineers) that have entered Greek Merchant Marine Academies in the academic year 2018-2019.

## 16.0 trillion \$

the value of global merchandise exports in 2016, according to UNCTAD statistics.

# II.50 million bpd

the US crude production forecast for 2019, exceeding that of Russia and Saudi Arabia through to 2019, according to the U.S. Energy Information Administration. (Data of September, 2018)





## Join us and explore the world!

216 - 226, DOIRANIS STR., GR - 17674, ATHENS, GREECE TEL: +30 (213) 007 6500 | FAX: +30 (210) 948 0023 EMAIL: mail@marangas.com

# Europe is being tested. What does the future hold?





Brussels may seem far away from the daily routine of the Greeks and may be of no particular "maritime" interest due to its geographical location, all the same, the current European Parliament and the European Commission's term of office is coming to an end and this ought to be an opportunity for serious thought.

At a meeting of the editorial team of *Naftika Chronika* with European Commission officials and other players in Brussels, it was evident that there is intense concern about the legislative work finally produced by the outgoing Commission despite the very high expectations created in the business world and among EU citizens by President Junger. Certain, perhaps stricter, officials and analysts went as far as to describe the current Commission as timid,

slack and perhaps spiritless in many important areas. The past five years have undoubtedly held many unpleasant surprises and obstacles, and the European Commission and the European Parliament have had to face issues on many open fronts. However, for those familiar with European reality, the most important challenges for European Union citizens, which as it happens are also directly related to the shipping industry, focus on four current issues.

By Ilias Bissias and Charis Pappas



#### China

The alleged attempts of the Chinese government to influence EU officials in order to obtain EU classified documents have caused a stir in European institutions. It appears that Chinese "agents" target high-ranking European Commission officials, whom they approach through Linkedin and initially invite to a completely free trip to the Chinese capital. There have been allegations that China systematically follows espionage practices, although the purpose of these practices is not clear.

At the same time, China's interest in strategic infrastructure investments in Europe - especially in the South - has alarmed the competent bodies, which are now scrutinizing Chinese investment moves systematically. Even more serious for those in the know is the fact that the benefit for countries accepting Chinese investments is rather limited as these mainly concern the

distribution of Chinese products, while all of Beijing's strategic moves around the globe are made with extreme secrecy and without clear long-term planning.

Many actually "complain" that One Belt One Road is more of a communication game than a substantial strategic investment programme as China has only managed to commit \$90 billion to its realization, versus the \$1 trill it had announced in 2014. In fact, the Beijing government is currently facing excessive debt as its Gross Debt to GDP ratio has reached an alltime high. Others, more suspicious, are talking about a means of future extortion by the Chinese, especially of countries in Africa, which will be unable to repay their debts to China for the construction of infrastructure projects and will be forced to eventually hand over their energy resources and other assets of strategic importance.

In any case, the undertaking of major and

strategic projects in the old continent by Chinese companies whose strategic goals are unpredictable leads to strengthening the competitiveness of Chinese conglomerates thus posing a future risk to European companies. This issue is a cause of concern in Washington and Brussels but also in many other metropolises that do not see the Chinese as Deus ex machina.

#### **BREXIT**

A possible BREXIT without a deal with the EU sounds like a nightmare scenario for British businesses and at the same time, the European Commission is expected to make the life of British Prime Minister Teresa Mei even harder. According to high-ranking European Commission officials, the EU's negotiation line will remain particularly tough, even... punitive. The officials Naftika Chronika spoke to believe that the European Commission's aim as regards



The undertaking of major and strategic projects in the old continent by Chinese companies with unpredictable strategic goals leads to strengthening the competitiveness of Chinese conglomerates thus posing a future risk to European companies.

gies such as facial recognition through the cameras available on the streets and buildings of European capitals. The example of Britain, where cameras 'watch' all citizens' moves, is seen as a success by the EU.

#### The migration crisis

Undoubtedly, the conditions in the reception and detention facilities for refugees must be human. The people we spoke to in Brussels, however, argued that if temporary detention facilities become "more welcoming" than necessary, then it is very likely they will trigger new migratory waves. In any case, Commission representatives say that many refugees are not just seeking a life of freedom without discrimination and persecution, but rather a better place under the sun in Europe. Often, refugees arrive in Europe not because they are being persecuted in their own countries - they would be safe in any country in their journey from Afghanistan, Syria or central Africa - but because they want to live a better-quality life in Europe. This reality is leading the political scene across the EU to polarization, resulting in extreme nationalist voices in all its big cities.

Britain's withdrawal from the European alliance is to cause an unbearable shock to the UK economy in order not to whet the appetite of other EU member states.

#### **Protection of Personal Data**

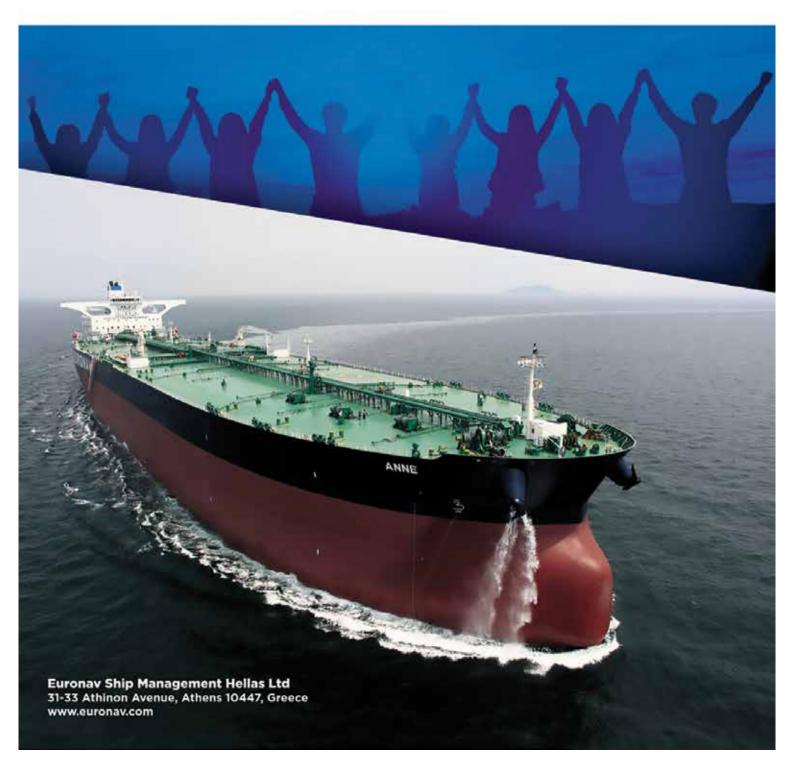
It appears that the European Commission's recent regulation on the protection of personal data is causing concern to businesses operating or wishing

to operate in the European market but even greater concern to the European institutions.

While combating terrorism remains a top priority for European leaders, the tools available to tackle terrorist attacks seem to have significantly diminished or even become dysfunctional. In any case, it seems that the Commission's experienced officials are managing to find legal loopholes in order to use new technolo-

● NAYTIKA XPONIKA





# Eradicating poverty by 2030. Is this target feasible?





While global poverty levels have declined by more than half since 2000, one in ten people in developing regions are still living with their families on less than \$1.90/ day which is the international poverty line. According to the UN, economic growth must be inclusive to provide sustainable jobs and promote equality. Social protection systems need to be implemented to help alleviate the suffering of disaster-prone countries and provide support in the face of great economic risks. However, the question remains: is the planned eradication of poverty by the year 2030 achievable or not?

By

Angeliki Koliomichou

and Giannis Theodoropoulos

While world poverty rates have dropped to more than half since 2000, one in ten people in the developing regions still live with their families on less than the global poverty line of \$1.90 a day. According to the Organisation for Economic Co-operation and Development (OECD) estimates, a 3.7% increase is expected in the global economy for this year and for 2019 compared to the initial projections of 3.8% in 2018 and 3.9% in 2019. The reduced OECD estimates are due to the continued trade disputes between the US and some of its major trading partners as a result of the protectionist trade policy pursued by Donald Trump.

What is interesting is that according to OECD analyses, the US, despite being the source of the current turmoil in world trade, is recording a better economic performance compared to other developed OECD economies, thanks to the US government's tax cuts and sharp spending policy.

In the OECD's recent Economic Outlook it is highlighted that rising interest rates in the US and a stronger dollar are expected to upset emerging economies such as Argentina, Brazil, and Turkey. Economic growth in the Eurozone countries is esti-

mated to rise to 2% in 2018 and 1.9% in 2019. At the same time, poverty levels worldwide are at historically low levels. Poverty, which is one of the most important social issues nowadays and appears to be hurting even the so-called developed societies, fortunately, tends to be declining gradually. More specifically, in a recent study, the World Bank says that the number of people living below the poverty line in the world today has declined although this decline has slowed down.

This has increased concerns that the target of eradicating poverty by 2030 will be hard to achieve. However, it is positive that at a global level the proportion of the population living below the poverty line dropped to the historically low level of 10% in 2015 (last available data) from 11% in 2013, signaling a steady but slowing decline. At the same time, the World Bank figures show that the number of people around the world with a daily wage below \$1.90 decreased by 68 million to \$736 million. Finally, it is important that half of the world's countries present poverty levels below 3% while the World Bank's estimates speak of global poverty levels of 8.6% for 2018.

18 • NAYTIKA XPONIKA







24, Kanigos str., 185 34 - Piraeus, Greece Tel: +30 2104147400 Fax: +30 2104222541-542 contact@targetmarine.gr - www.targetmarine.gr contact@horizontankers.gr - www.horizontankers.gr



# Greek islands are a basic piece of our cultural, economic and social web







Island communities face particular development challenges and cannot be competitive "vis a vis" the European mainland. Within this framework, the development and implementation of a holistic insularity policy, especially in an island country such as Greece, is a sine qua non condition for exploiting the island features that lead to sustainable economic growth. Nektarios Santorinios, Deputy Minister of Maritime Affairs and Insular Policy talks to Panagiotis Kapetanakis about the Greek government's measures for insularity, the port industry, and maritime education.

Nektarios Santorinios, Deputy Minister of Maritime Affairs and Insular Policy talks to Panagiotis Kapetanakis Deputy Minister, two years ago, you assumed the responsibility of the Island Policy Portfolio. Today insularity is at the center of the public debate. How important is it for an island country such as Greece to place the islands and the needs of the islanders at the heart of the state's development agenda?

As I have stated before, Greece depends on its islands and the Greek islands are a basic piece of our cultural, economic and social web. When the Ministry of Insular Policy was founded, Prime Minister Alexis Tsipras announced a set of measures for insularity, stating that the welfare of islands would now be Government's main goal. For a long time, the citizens of the islands were excluded from politics and felt like second-class citizens. It is observed that on the islands there is a serious lack of infrastructure such as ports, water desalination, water supply networks, road networks, health infrastructure, etc. Moreover, the lack of an integrated insular pol-

20 S NAYTIKA XPONIKA



icy that would address the intertemporal problems of distance, higher cost of living, and isolation have led to the point where island citizens do not feel equal to the citizens of the mainland.

Our policies, which include significant funding for upgrading island infrastructures, as well as the introduction of the transport equivalent, were a serious set of measures that have boosted the sleeping economic status of the islands and planted the seed for a new phase in their social growth.

One of the issues that concern islanders is that of the infrequently serviced lines to the major ports of the country during off-season periods. What steps is the Ministry taking to address this crucial issue, which affects thousands of our fellow citizens and is a constant demand from local communities?

One cannot sketch without a pen and, in our case, we cannot present a flawless ship network to the people without taking into consideration the state and availability of ships nowadays and the state of the island ports. Nevertheless, during the last three years, the state of the lines and ship service has been significantly upgraded. Ships call at Aegean island ports more frequently and the majority of islands have a connection with the big mainland ports. Through systematic work, we are soon going to announce institutional changes in the basic coastal shipping law programs for the technical reinforcement of the Ministry's Domestic Sea Transportation Directorate.

Moreover, the National Technical University of Athens has undertaken a study that will reflect the real needs of passenger and commercial goods transportation. In addition, our aim is to give enough incentives in order to finance, through European funding, the re-establishment of multiannual contracts for short distances like Nisiros - Kos, so that newer and more modern ships that use the latest environmentally- friendly technologies will come to join our sea network.

The foundation of the Maritime Academy in Kalymnos, in the Dodecanese, which is expected to open its doors in few days, is another step towards ensuring that Greece is and will remain a pioneer in shipping.

Many of the Greek island ports face either bureaucratic obstacles or a lack of sufficient resources to improve their infrastructure, making it difficult to connect with the country's major ports in winter but also in the summer months when there is an increase in tourist traffic. What are the solutions you propose and in what direction is the ministry moving to address this crucial issue?

The port industry, which is closely tied to the logistics sector and to the wider field of intermodal transport, is of vital importance to the national economy. The modernization of public infrastructure in tourism, e.g. airports, harbors, marinas, and tourist accomodation, is one of the main targets in our Growth strategy. Accessibility is perhaps the islands' most important problem. It is necessary to mention that so far, the majority of a total of I,100 large and small ports, bays and mooring locations have been registered in the PORTIS database system, which includes economic and technical data for the purposes of better planning and utilization.

Legislative measures (4504/2017) have resulted in limiting bureaucracy and in providing mechanisms/tools to Port Authorities in order to finally legalize certain port installations. A working group set up by executives from our Ministry, the Ministry of Interior and relevant stakeholders has established practices and regulations for a sustainable national port management system. Our next move was to support the modernization of the fleet. We reached the point where all the islands are served by "young" and fast ferries.

Nevertheless, upgrading and modernizing both passenger and freight transport systems to the islands is necessary. Since the TEN-T network does not include yet small island ports, it is our obligation to improve them. This is why a 180 M EUR public investment project in the North and South Aegean Islands for the period 2017-2020 is on track. It will boost the local economy and entrepreneurship and will finance infrastructures, mainly small ports combined with environmental protection projects. But we have also created greater opportu-



nities for wider investments. The Ministry of Economy and Development, with the resources of the Competitiveness, Entrepreneurship and Innovation Operational Program of the NSRF for the period 2014-2020, as well as national resources, has established the Infrastructure Fund of Funds (InfraFoF). In this context, the European Investment Bank. as Fund Manager, has approached eligible financial institutions and selected some as InfraFoF financial intermediaries and will receive funds of up to 450 million euros in order to finance investments in renewable energy sources, energy efficiency, and urban development. Today we are more optimistic about the island ports since we work with all the relevant ministries on a daily basis to address the inequalities faced by island communities.

Another important issue that is high on the agenda of the Ministry is the attraction of young people to Greek shipping, which remains firmly dominant in the world's seas. What measures is the Ministry taking to attract young people to the maritime profession to maintain Greek seamanship within a strong competitive environment in world' seas?

It is true that the Greek shipping is firmly dominant in the world's seas. But, in my opinion, the key to that success is the human factor. Greeks have always been mighty captains, sailors and above all, merchants, who respected the sea but were never afraid of it. Nowadays. Greeks are still in the front line of global shipping and many of its great crews have been educated in the Greek Maritime Academies. Our Ministry has done a lot of work towards upgrading and enforcing maritime education by choosing well qualified teaching staff, by giving students a benefit in order to cope with the cost of living and studying, and by providing well-equipped classrooms with modern equipment. Moreover, the foundation of the Maritime Academy in Kalymnos, in the Dodecanese, which is expected to open its doors in few days, is another step towards ensuring that Greece is and will remain a pioneer in shipping.

22 • NAYTIKA XPONIKA

M/T AEGEAN MARATHON, DWT 159.000 MT, BUILT 2016 at HHI, Ulsan



# EXCELLENCE IN OIL TRANSPORTATION



www.arcadiasm.gr



# The end of the stability support programme period marks a new era for Greek ports





An article by Dr. Christos Lampridis, General Secretary of Ports, Port Policy and Maritime Investments, Greek Ministry of Maritime Affairs and Insular Policy



The country's entry into the stability support programme period, beyond the purpose of rescuing the banking system, also came as a result of the inadequacy and inefficiency of the economic development model. However, it appears that in many cases during this period, the policies that were proposed were "intended" to implement policies of extreme neo-liberal inspiration, rather than to help integrate Greece into European regularity.

The end of the stability support programmes in August 2018 is a landmark date because, in the period that follows, the Greek government is liberated from strict supervision and can now have a greater degree of freedom to design and implement policies in support of the public interest, labor rights, and development. However, the present government questioned the substance and the objectives of the support programme policies from the very first moment it took over and continued to do so even during the implementation of the August 2015 compromise agreement, against vested interests

and neo-liberal ideological approaches. This government has not proved to be a "better student" than previous governments but has tried and in many cases succeeded in altering the policy mix and the implementation tools, while maintaining its credibility by achieving concrete fiscal results.

#### IMPLEMENTING AN ALTERNATIVE PLAN FOR THE PORT INDUSTRY

With respect to the port sector and the port industry, the government counter proposed a sustainable development plan for the port organizations with strong

24 © NAYTIKA XPONIKA

public supervision and the possibility of using private funds for investment in specific sectors. This development plan replaced the rigid privatization programme that had been proposed by previous governments.

In particular, with respect to the plans for the immediate completion of the privatizations of Piraeus Port Authority and Thessaloniki Port Authority initiated by the previous government, it has succeeded in:

- safeguarding labor rights and maintaining the rules of internal organization and operation of staff
- ensuring mandatory investments aimed at expanding real growth potential not only in these two ports but also in the economy at a local, regional and national level
- ensuring the continuous functioning of the ports and their development by specifying minimum service levels goals
- ensuring the continued unhindered operation of small and medium-sized enterprises related to a port's operation and the use port infrastructures
- excluding from the Concession Agreements areas of the port land zones which were not used for port operations so they could be assigned to the municipal authorities.

With regard to the ten ports whose shares have been transferred to Hellenic Republic Asset Development Fund (HRADF), the plan of the previous governments for the sale of the majority stake of the share capital of the Port Organizations was reversed as they remain state-owned. The agreement reached with the institutions calls for a partnership between the public sector and the private sector to develop specific activities in the ports, in line with the European port operation model which ensures increased supervision by public port authorities.

For the remaining smaller ports (about 900 port facilities managed by 90 port managing bodies) which are primarily under the jurisdiction of local governments, the extreme neo-liberal plan that included merging the port managing bodies into a single public body and transferring them to private operators did not proceed. Instead, in cooperation with the Ministry of the Interior, a public consultation was initiated to reorganize the port governance system on the

basis of the following axes: a) the creation of viable and powerful management bodies, b) the preservation of their flexible operation, c) the indisputable participation of the local government, d) the preservation of their public character.

#### REVERSING A LONG DEPRECIATION PATH

The process of the intentional downgrading of public infrastructures and their operation so that their transfer to the private sector could be justified is a practice that has been applied in many sectors. However, we should not forget that operational problems are not always due to the desire to downgrade, but to the inherent weaknesses of the governance system as well. In the port sector, the inability to exploit the comparative advantages offered by the country's geographical position, low freight attraction, difficulties in realizing the necessary investments. the poor quality of the services provided, the difficulty in utilizing financial resources, the delays in the implementation of important works, and even the inability to collect port dues are common features in the operation of the port system.

To address all these problems, several interventions were needed to reverse the trend of depreciation, such as:

- creating a database for the registration of all ports and port facilities as well as for the prioritization of the required projects
- increasing funding to ports through the Public Investment Program by tripling the available resources and exploiting the NSRF for port facility security projects
- designing and implementing important port infrastructure projects that solve long-standing problems and improve the level of services provided
- legalizing existing port facilities (which the state has built) after environmental impact studies have been completed so that new interventions can be undertaken to enhance security and improve the service provided
- simplifying procedures for performing the necessary technical maintenance works to prevent imminent danger
- reducing bureaucratic procedures for the execution of small-scale projects
- · strengthening the capacity for col-

- lecting port dues by allowing staff recruitment, contracting with third parties, and the use of electronic systems
- the possibility of placing liners in areas within a sea port area
- the possibility of establishing port offices in order to manage the so-called "orphan" ports
- recruiting staff to fill vacant organizational positions in Port Organizations
- turning the port areas which are not used or will not be used for the port activity over to local administration.

It is also significant to point out that since the autumn of 2015 the new administrations of the Port Organizations have succeded in improving the operation of ports, significantly increasing the economic and commercial benefits, and demonstrating that even in this severe economic crisis there can be positive results for the economy and society.

One should not fail to mention the intense and systematic intervention of Greece through the Ministry of Shipping and the General Secretariat of Ports and Ports Policy in the European Institutions and the initiatives that are being developed to enable Greek ports to assert an active role in shaping the European framework in the new era.

In the Pilotage Services, as in other services which despite their financial surpluses had been left to deteriorate in order to be discredited and eventually passed to the private sector, the process was reversed. For the first time since 2003, new equipment was purchased and pilots and crew members were recruited for the first time since 2008 while staff positions that were cut in 2014 (despite the fact that this was not demanded by the stability programs) were reinstituted. As a result, the Pilotage Service is now on the road to modernization and development. An example from other areas of the General Secretariat for Ports and Ports Policy is maritime tourism, where according to the ship-owners, the reduction of illegal chartering and the change of the institutional framework increased the chartering of Greek vessels by 80%, resulting in the growth of jobs and revenues for the Greek economy. In this area, not only was the full liberalization of industry prevented, but unfair competition was reduced as well.



## NEW CHALLENGES IN THE PERIOD AFTER THE STABILITY SUPPORT PROGRAMMES

It is evident that throughout this period the current government has challenged the philosophy of stability support programme policies and managed to satisfy the long-standing demands of local communities (such as the turning the unused port area over to local government) or to solve problems within particularly difficult circumstances. It has defended the rights of workers in ports and promoted solutions for them.

However, nobody should disregard that although the government's efforts have led the country to a certainly more favorable operating environment with a high degree of independence in its choices, the current conditions are difficult. Greece may no longer be a unique phenomenon and "pariah" country, but it remains a European country with problems similar to those of many others European countries, especially in Southern Europe, for which a comprehensive solution should be sought and implemented.

In the period ahead, it is important to pursue the upgrade of Greek ports, first by effectively integrating Greek ports into the Trans-European Transport Network, and, secondly, by effectively meeting the economic and social needs of the rest.

Thus, it is required:

- to implement investments that are planned or are necessary for the main ports of the country. The Concession Agreements for Piraeus and Thessaloniki ports provide for specific investments while the institutional framework for the promotion of investment projects in the other ten ports belonging to the Hellenic Republic Asset Development Fund (HRADF) is ready to be voted on
- to increase jobs, and secure further consolidation of labor rights
- to submit a proposal for consultation and then finalize the institutional framework for changing the port governance system in order to create strong and effective port management organizations
- to increase funding of ports and the use of European financial instruments for this purpose
- to generate multiplier benefits for the economy by developing new activities (mainly in logistics and equipment assembly), which will come as a result of investments that are implemented or will be implemented in ports and will provide added value
- to develop cooperative relations between the ports and the urban areas surrounding them. After the completion of the concession of areas in Piraeus. Thessaloniki, Patras, Alexandroupolis and Kavala, similar concessions are planned for the municipalities of Thriasio, Lavrio, Rafina, Corfu, Igoumenitsa, Volos, and Heraklion.

One last element concerning the country's strategic objectives in the port sector concerns our intervention at a European level. The end of the programme period finds Greece at a time when the forces and ideas of the Left in Europe and the world are not dominant, despite the fact that they are recovering in a number of countries. Although SYRIZA's prevalence in Greece and the tough battle it gave with superior forces in order to support the public interest could have had significant effects on the European political scene, it has been made apparent that some issues should be tackled at European level in cooperation with the progressive and leftist forces.

For example, in the port sector, the concentration of international cargoes in a small number of carriers operating simultaneously as ship and port managers gives these companies (mega carriers) a huge bargaining power over states trying to use port infrastructure for the needs of their economy and their development planning. Regulating the field at European level to create a framework for safeguarding the public interest over the power of mega carriers is necessary and requires alliances.

Balanced growth between the North and the South is also necessary in Europe. In the past, at times of economic prosperity and within a favorable framework for state intervention, significant port infrastructure was built in the North. Today, as there is a need to develop corresponding port infrastructures in the South, proposed regulations promoted by the Member States concerning, for example, investment in EU by third countries, the tightening of the State aid framework and the existence of internal regulations may deprive developing countries of development opportunities.

It is necessary to create a framework for balanced development between the North and the South at European level.

The environmental dimension of transport activity has evolved into a prominent position in recent years. But the rhetoric at European level to increase the use of environmentally friendly means of transport is not being translated into action as financing tools to enhance maritime transport are limited. Strengthening investment in maritime transport at a European level should be a priority objective.

Developing the islands and remote areas by providing increased funding for their infrastructures and defending and safeguarding the rights of port workers also require overall European regulation.

In a period when competing and cooperative plans for the development of the global transport system are being drawn, and the global transport map is being shaped in a dynamic way, Greece is entering the post- programme period. Our effort in the difficult stability programme period shows that we have the ability and the knowledge to succeed and respond to the challenges that lie ahead of us.

26 • Naytika xponika



# Greece is your choice. Celestyal Cruises is your award winning local guide.

A cruise with Celestyal Cruises is an unforgettable experience.

Because it takes you not only to all the must-see destinations but also to all the hidden gems of Greece, all the while enjoying overnight stays in Mykonos and Santorini on selected itineraries.

Awarded by the world-renowned Cruise Critic platform with **Best Service** & **Best Value awards** for the excellent services on board and the more intimate experience of our mid-sized vessels, the **Celestyal Inclusive Experience** is certified to offer you the best Greece has to offer in one single price, with no extra charges.





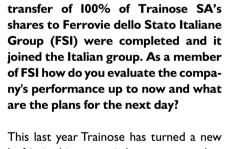


# Trains and transport infrastructure in the Balkans: An era of great developments





Following the decision of the Greek government in 2017 to sell railway operator TrainOSE to Italy's Ferrovie dello Stato, a new chapter has begun for Trainose. In his interview to Naftika Chronika, Trainose's CEO Philippos Tsalides focuses on the development prospects of passenger and freight transport in Greece, the expansion of logistics, as well as the large investment programme of the FSI Group.



On I4 September 2017, the sale and

This last year Trainose has turned a new leaf in its history as it became a member of the FSI Group, one of the largest railway companies in Europe. The FSI Group came to Greece with a vision of growth and modernization. It continues to invest steadily contributing to Greece's path to growth in the area of rail transport of both passengers and goods, and to the further development and expansion of logistics services.

The €500 million investment programme concerns new rolling stock, hiring new staff, the development of new services as well as the application of new technologies. This amount is being invested in the improvement of passenger and goods trans-

port. In the passenger transport sector, Trainose is focusing on upgrading the Athens – Thessaloniki line. The upgrade includes new trains, increased frequency of service, utilising the new railway infrastructure, and improving general rail safety. Trainose is also planning improvements for the modernisation and growth of its Suburban lines.

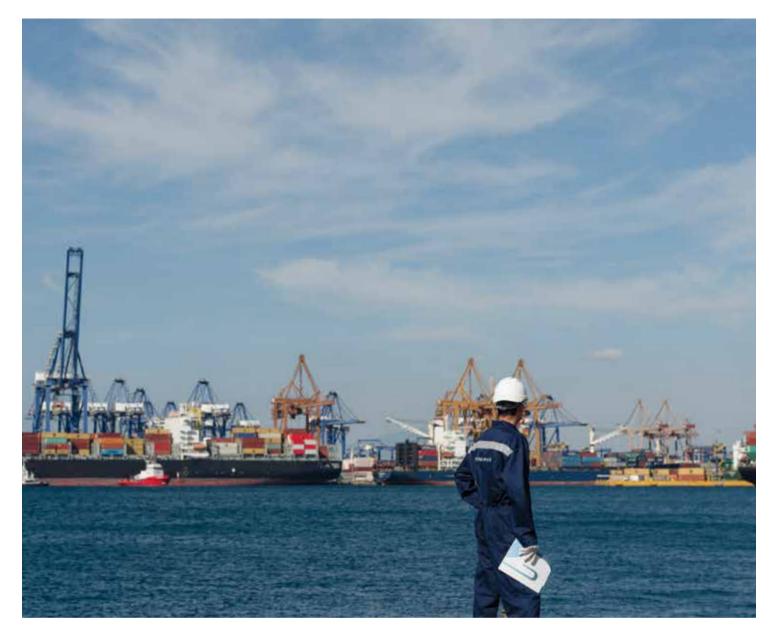
A few weeks ago, Trainose unveiled a high-speed train nicknamed "Silver Arrow" that will reduce the journey between Athens and Thessaloniki in northern Greece to 3 hours and 20 minutes. What does the arrival of this train signify for rail passenger transport in Greece?

The new train can only signal the beginning of a new day for rail transportation in Greece. With the delivery of the last section of Lianokladi – Domokos to the network and following the necessary tests, the new train will take to the rails, ushering a new era for the Greek railway. As



Philippos Tsalides, Chief Executive Officer Trainose SA, talks to Panagiotis Kapetanakis

28 • NAYTIKA XPONIKA



# Mylaki Shipping Agency Ltd

Ship Agency • Ship-to-Ship Transfers • Protecting Agency • Canal and Straits Transits Electronic Customs Clearances • Ship Supply • Husbandry Services • Ship Lay-Up Change of Management / Ownership • Technical Support • Ship Repairs



43, Iroon Polytechniou Ave. 185 35 Piraeus, Greece T: +30 210 422 3355 F: +30 210 422 3356 ops@mylakiltd.gr www.mylakiltd.gr

#### Greece

Ag. Theodoroi: 1, Spirou Meleti St., 200 03 Ag. Theodoroi T: +30 27410 62301 / F: +30 210 422 3356

Alexandroupolis: 6, M. Botsari St., 681 00 Alexandroupolis T: +30 21670 05952 / F: +30 23102 23932

Aliveri (Mylaki Port): 18, A. Nika St., 345 00 Aliveri T: +30 22230 23692 / F: +30 22230 23789

Chalkis: 10-12, Voudouri Ave., 341 00 Chalkis T: +30 22210 74810 / F: +30 22210 76760

Eleusis: 19, Kanellopoulou St., 192 00 Eleusis T: +30 210 556 1654 / F: +30 210 556 1655

Kavala: 1, Er. Stavrou St., 654 03 Kavala
T: +30 2310 230577 / F: +30 2310 240391

Lavrion: Lavriou Sq., 195 00 Lavrion
T: +30 21670 05953 / F: +30 210 422 8096
Patras: 124, Ag. Andrea St., 262 21 Patras
T: +30 2610 422102 / F: +30 2610 434297
Thessaloniki: 7, Karatasou St., 546 26 Thessaloniki
T: +30 2310 283375 / F: +30 2310 223932
Volos: 32, Argonafton St., 382 21 Volos
T: +30 24210 23496, / F: +30 24210 39361
Yali (Island): Yali-Nissiros, 853 03 Dodecanese
T: +30 24240 92086 / F: +30 22420 92086

7, Klimentos & Kleomenous St., CY 1061, Nicosia T: +357 22452080 / F: +357 22754801

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

#### **NEW ERA FOR GREEK RAILWAYS**

soon as the necessary ECTS safety systems are completed in 2019 (signalling, telecommanding, etc.), the Athens – Thessaloniki route will be travelled in the muchawaited time of 3 hours and 20 minutes. The completion of the railway network will enable these new trains to travel at the maximum speed allowed by the infrastructure. This means that practically all the itineraries on the 500 kilometres from Athens to Thessaloniki will be carried out using the new high-speed trains. Therefore, the public will have all the more reason to choose to travel to Thessaloniki by train.

In recent years the cruise market in our country has been experiencing a period of significant growth. A few months ago, Trainose announced the "Olympian Trail" route, a product aimed to attract and offer cruise passengers in Greece "the trail of a lifetime experience". Do you believe the cruise market can be a force for the further development of the Greek railways? Are there any other plans for new tourist routes?

In the summer Trainose will be launching the 'Olympian Trail', offering a unique experience, a train dedicated to ancient Greek history and Ancient Olympia.

Apart from that, we are also planning to enhance our passengers' travel experience on our other lines such as Odontotos and the Pelion Train. Both journeys are unique experiences if one considers the activities that complement them, such as hiking and the sights one can visit.

The rail travel landscape in Greece pro-

vides many opportunities and a great growth potential in the tourism sector. There are, in fact, underutilised areas such as the old Peloponnese network, with high untapped potential; with sights like Mycenae, Nafplio and the Peloponnese mountains, which can only be crossed by train. In Evros, Northern Greece, we are currently evaluating the sustainability and market potential of a tourism offer around the Evros Delta, the River Nestos and the area of Toxotes, near Xanthi, a unique showcase of nature's artistry, mostly accessible by rail only.

Apart from passenger trains, Trainose SA operates all freight trains in Greece. What are your plans in terms of freight transport and the development of logistics centres in the country?

Trainose's freight transport services have a significant development footprint due to the rail connections to Greece's main ports, namely those of Piraeus and Thessaloniki, which are uniquely positioned as portals for the transportation of goods from Asia and Southeast and Central Europe and vice versa.

Projects such as the 'Egnatia Railway' and the interconnection of the ports of Northern Greece with the ports of Bulgaria on the Black Sea enhance Greece's geopolitical importance.

Upon completion of the infrastructure works, freight transport will become more effective, sustainable, and price competitive. Increased capacity affords us the opportunity to significantly increase the vol-

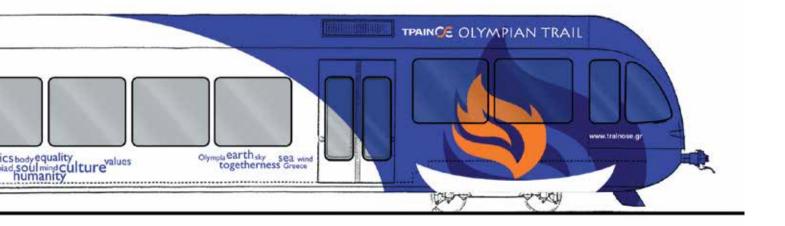
ume of goods we transport for our clients from and to Piraeus, as well as from and to the port of Thessaloniki.

All indications confirm our estimate that in the next two years we will record a significant increase in annual freight transports. At the same time, the six Commercial Centres that the Greek government plans on creating in Alexandroupoli, Volos, Larissa, Kavala, Igoumenitsa, and Patras, in combination with Trainose's modern Freight Railway services, will upgrade Greece's profile as an international Intermodal Transportation hub, with obvious advantages for Greece's production infrastructure, both in the primary production and the processing sector.

How close are Trainose and Chinese Cosco to an agreement to jointly build and operate a new logistics hub in the Thriasio industrial zone, west of Athens?

One of the most important sectors in the Greek economy and a powerful driver of growth is the logistics sector, which represents 10.85% of the GDP, a value of €19.8 billion according to E&Y international consultant services. Greece could play a major role as an international freight transport hub due to its well-placed storage areas, its improved access to ports, and its competitive leasing prices.

With the development of the logistics complex in the Thriasio area and the utilisation of two major warehouses (KI and K2), Trainose is implementing its goal to create a modern logistics centre providing higher quality services to its customers.



NAYTIKA XPONIKA









# To scrub or not to scrub?

THOUGHTS AND CONCERNS OF THE SHIPPING INDUSTRY ABOUT THIS BILLION-DOLLAR QUESTION

Given the fact that the installation of scrubbers comes at a huge cost for the shipping companies, the editorial team of *Naftika Chronika* has asked distinguished members of the shipping industry with extensive experience in marine technology issues to present the benefits and drawbacks of this technology which has proven effective in land-based industries.

Recent studies and reports have concluded that scrubbers may last onboard a ship for less than ten years due to the acidity of wash water and because they do not provide a sustainable solution for Sulphur emissions. Among the best- known experts, Dragos Rauta, Technical Director of INTERTANKO has also stated his skepticisms for scrubber technology in the recent and much talked- about Sea Asia report titled "2020 Sulphur Cap: Is the industry ready for the long-run?".

This special report presented by *Naftika Chronika's* editorial team on scrubber technology is hosted in the following pages in three distinct sections. The first section presents the concerns of the chairman of the Hellenic Marine Environment Protection Association (HELMEPA). In the second section, we host the thoughts of CEOs and managing and technical directors of shipping companies as regards the future of scrubber technology from an operational point of view. In the third and final section, we host the opinions of major Class Societies on the necessity of Quality Assurance certifications for scrubber systems, as well as their thoughts on the lessons learnt from the BWMS era.

The views and opinions of the authors are presented in three sections and in alphabetical order.

Edited by Charis Pappas

## It is difficult to understand why shipping has found itself in the position to have to face a problem not faced by any other transport mode



Dr. George A. Gratsos
Chairman, HELMEPA

According to existing regulations, after January 1st, 2020 ships will have to burn Low Sulfur Fuel or be fitted with equipment to remove sulfur oxides from exhausts. Compliance is mandatory. Industry and refineries should be able to assist shipowners to comply with these regulations. It goes without saying that international trade cannot be disrupted.

Scrubber technology already exists. Because of the costs and uncertainties involved, only a very small percentage of the international fleet will be equipped with scrubbers by January 1st, 2020. On the other hand, refineries are already on record saying that they will be able to supply compliant fuel.

That being the case, the decision that owners must take depends on the type, age and trade of the ship and has to be made, as is always the case, on insufficient information to be able to make a rigorous cost benefit analysis covering all parameters. Especially the differential cost between LSFO and HSFO over time. If LSFO prevails, what would the availability of HSFO be for the ships that have already fitted scrubbers? Considering the costs involved, such questions are very important for the future profitability of the ship.

Above all, any solution must be safe for both the ship and the environment. Using Low Sulfur Fuel Oil is fairly straightforward but more expensive. It is imperative that it is stable over time and safe to use, which is difficult. There are presently no detailed international specifications to ensure that fuels provided worldwide

are consistent and can be safely used on board without creating problems of compatibility with other similar fuels bought at different ports from various suppliers and on different dates.

The process of desulfurization of ship exhausts will create residues which will eventually have to be disposed of. Are these residues environmentally safe?

Ships equipped with scrubbers can use HSFO. Scrubbers constitute a substantial additional piece of machinery placed on board that will require modifications to accommodate it and suitably trained seamen to monitor, operate and maintain it. They will also require more energy, hence emit more CO<sub>2</sub>. The process of desulfurization of ship exhausts will create residues that will eventually have to be disposed of. Are these residues environmentally safe? They may also cause damage to piping and equipment as they may be acidic.

All the above represent unknown additional costs that will have to be accounted for. All these aspects must be examined before committing oneself to one solution or the other.

It is difficult to understand why shipping has found itself in the position to have to face a problem not faced by any other transport mode. Fuels used in airplanes, trucks, and cars of all sorts, as well as railroads, are always given rigid specifications for environmental safety and safety of use. The way the international community handles shipping fuels is unique. Over time, shipping has been given fuels that are incompatible to other fuels available. Others cause damage to the fuel system on board. This creates problems for the ship's safe operation at sea. All these problems are well documented. It is about time regulators strictly regulated the specifications for fuels supplied to shipping so that such events do not occur.



34 • NAYTIKA XPONIKA



# \* SYNTHETIC ROPES \* WIRE ROPES \* ANCHOR CHAINS - ANCHORS

### **WORLDWIDE SERVICE**

#### Head Offices & Warehouse:

56, Gravias Str. 185 45 Piraeus-Greece Tel: +30 210 4060600, Fax: +30 210 4615211, 210 4612548 E-mail: koronakis@koronakis.gr, sales@koronakis.gr Web Site: www.koronakis.gr

#### Stock Points

Piraeus, New York, Houston, New Orleans, Los Angeles, Panama, Dominican Republic, Singapore, Fujairah, Durban, Cape Town, Rotterdam, Antwerp, Hamburg, Livorno, Tarragona, Algeciras, Las Palmas



# It is highly likely that compliance with the new environmental regulation through the use of scrubbers will only be a temporary solution



Stamatis Bourboulis
General Manager,
Euronav Ship Management (Hellas) Ltd.

Given the risks for any statement that attempts to predict the future in a definite manner, I would rather highlight some parameters that could be decisive factors in the future use of scrubbers:

- Environmental concerns especially in relation to the open loop configuration due to the transferring of the pollutants from air to sea by the scrubber washwater. So far, this impact has not been assessed thoroughly. Furthermore, the installation and use of scrubbers increase the ship's energy consumption and greenhouse gas (CO<sub>2</sub>) emissions.
- Installing such a system escalates the machinery complexity as well as the operational and maintenance challenges for the crew. It will be necessary to run the scrubber system continuously (there is no room for scrubber downtime since in such case the ship will violate the environmen-

tal regulations in relation to Sulphur emissions). This is quite demanding for any system's reliability which must be 100%. The aggressive nature of the scrubber washwater (formation of sulphuric acid) is a challenging factor for the scrubber materials and the piping that will be used.

Every scrubber installation is based on the bet that such a price difference will place the ship in a better position in the market and the investment will pay back quickly.

So, the question that comes to mind based on the above is, of course, why would somebody make a huge investment that could be as high as 10% of the ship's value if it causes such concerns to the ship operator? The answer is that the choice of scrubber is based on the anticipated financial benefit of the potential price differential of the High Sulphur (3.5%) Fuel with the Low Sulphur (0.5%) Fuel. The drop in the demand of HS Fuel is expected to result in a considerable price drop since only the ships that will have a scrubber will be allowed to use it. Every scrubber installation is based on the bet that such a price difference will place the ship in a better position in the market and the investment will pay back quickly. The rush for installing a scrubber before January 2020 indicates that this anticipation is strong for the beginning of the global sulphur cap period due to the abrupt change of the fuel demand in terms of sulphur content.

Could the bet be wrong?

- The expectations for cheap fuel may be refuted due to logistical infrastructure; only about 5% of the ships are expected to have a scrubber installed and therefore the Heavy Sulphur Fuel may not be quite readily available and as cheap as expected.
- There are many reasons to believe that the disruption to the fuel mix currently used by the ships will quite

soon be normalized by the refineries responding to the new fuel demand profile and filling any gap with either straight run compliant fuel based on sweet crudes (blended with a small portion of distillate if necessary) or through cracked and desulfurized heavy fuel.

Based on the above, it is highly likely that compliance with the new environmental regulation through the use of scrubbers will only be a temporary solution and probably not even economically justified.

## Scrubbers may stay in the market for longer than anticipated



Stavros Hatzigrigoris

Maran Gas Maritime Inc.

5 to 10 years is not a short time especially in view of the upcoming IMO 2030/2050 GHG emission requirements. In order to meet the 2030/2050 requirements, a radical re-design of ships will be necessary and therefore tested designs such as the scrubbers may stay in the market for longer than anticipated.

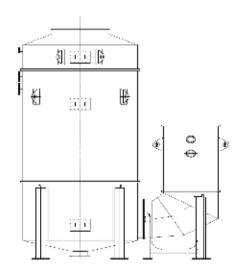
Bunker suppliers are currently indicating that the price differential between 0.5% S Heavy Fuel Oil (HFO) and 3.5% S HFO starting on 0I/0I/2020 and for some time after that may be as high as 300 USD/MT. In this case, a "huge" investment may turn into an opportunity for quick profit. The current estimates are that up to 3000 ships will be provided with scrubbers be-

36 • NAYTIKA XPONIKA



# SCRUBBERS BY KANGRIM

THE WORLD'S LEADING MARINE EQUIPMENT MANUFACTURER





fore or shortly after the lst of January 2020. The majority of these vessels are large ships (VLCCs, large containers, and large bulk carriers) and the current estimates for the consumption of these ships could be +/- 20% of the total bunker requirements for the worldwide fleet.

If 30% of the worldwide fleet bunkers requirements are for 3.5% S HFO, I have the feeling that the 10 years horizon may become longer.

What we have seen recently is that owners of MR tankers and Ultramax bulk carriers are investing in scrubbers. For these ships, the scrubber amortization period is close to five years or even more. Taking this into account it is clear to me that the owners of smaller ships may have in their mind a horizon of more than 10 years.

Bunkers suppliers and refining people say that they will keep producing 3.5% S HFO for as long as the demand is there. If 30% of the worldwide fleet bunkers requirements are for 3.5% S HFO, I have the feeling that the I0 years horizon that has been indicated may become longer. Sorry to dispute what Dragos is so certain about. Is he prepared to place a bet, say I00 Euros? This is how definitive the situation is today. Not worth placing a bet of over I00 Euros.



# Adopting the scrubber option for the world fleet will result in billions of dollars of costs for an already suffering industry



Takis Koutris

Managing Director,

Roxana Shipping S.A. & Kristen Marine S.A.

We start our contribution to this discussion with the reservation that commenting on a statement isolated from the whole presentation an individual has made might be ineffective. We would rather share with you our thoughts on the issue of scrubbers as an option, as an option to protect the environment and not merely to comply with Marpol, and particularly versus the clean fuels option.

As individuals and as an Industry we are mature enough to understand that our environment is the absolute priority.

Without the proper environment we will not exist, then dealing with health and safety is nonsense. The basic, if not single, argument of the opponents of the clean fuels option is the commercial impact due to the high cost of ULS FO and the alleged non-availability issue. But the clean fuel option will improve the quality of life of our seamen on board, simplifying operations and eliminating a plethora of hazards, Health Safety, and Pollution related (fatalities due to H2S an easy reference). A simple clean fuel engine room will be cost effective, saving newbuildings three million

more or less, depending on size, compared to today's traditional engine room. Operations and maintenance cost, labor, spares, stores will be drastically reduced. The scrubber solution "offers" exactly the opposite. Adopting the scrubber option for the world fleet will result in billions of dollars of costs for an already suffering Industry. Despite the unavoidable consolidation of bunkers suppliers, the binding of storage ashore, on barges or floating facilities, for a product that will be servicing about 2,000 out of 30,000 vessels is a thorn.

As a consequence, it is very likely that HFO availability local-wise and quantity-wise will be limited even before 2021, then the relentless supply and demand law will prevail, increasing the HFO cost to a level not matching the various cost-benefit analyses, possibly excluding operators having already installed scrubbers on big sizes and high-speed vessels.

Transforming air pollution to water pollution, for the open loop scrubbers, is not the way to protect our environment.

Therefore, the commercial impact and the availability issues seem related to the scrubbers rather than the clean fuels. Transforming air pollution to water pollution, for the open loop scrubbers, is not the way to protect our environment. Appreciating the manufacturers' agony, we suggest investing in clean technology improvement rather than stretching to get around the problem, sticking to the HFO option.

We follow with regret the activity of IMO, dealing with utmost care to mandate management plans for the operators to ensure as of I January 2020 only compliant fuel on board, an exercise that operators went through successfully twice when shifting to I%S and then 0.1%S.

However, to the best of our knowledge, there are no concerns in IMO for the reliable operation of scrubbers, taking it for granted that a technology that has not proven itself on ships will consistently perform successfully in the oceans.

# FWG

#### Fresh Water Generator



In response to client requests for a reliable and competitive unit we introduce Farad's FWG line that produces 15 to 40 m3/day of fresh water from seawater. Heating medium is engine jacket water or steam.

Our new FWG product line is the result of years of experience in sea water heat exchanger manufacturing.

#### **Advantages**

- # Easy installation
- # Utilizes proven shell and tube design
- # Brine piping in CuNi as standard for extended lifetime.
- # Materials and parts sourced from reputable EU manufacturers
- # Low maintenance cost

14, Alon Str. 185 40 Piraeus, Greece Tel.: +30 210 4227 410 Fax: +30 210 4227 303 e-mail: info@farad.gr

www.farad.gr



...we work on quality

#### **HEADLINING STORY**

#### Concluding:

- The clean fuels route seems currently the only way for us as individuals and as an Industry to fulfill our obligation to protect our environment.
- Scrubbers are a short term, non-environment-friendly solution, therefore we support Mr. Rauta's statement, with the reservation that IO years of life for scrubbers seems optimistic, we would rather predict a less than 3 years actual profitable life heading for 2021, with the exemptions as illustrated above.
- IMO should, with immediate effect, embark on mandating:
  - » continuous monitoring and recording of scrubbers' performance
  - » availability on board ships with scrubbers of a 30 days safe sailing 0.1%S fuel, for emergency use should the scrubber fail.

In due course. high Sulphur fuels may be phased out altogether and therefore scrubbers on board vessels may become obsolete



Menelaos A. Pangalos Managing Director, Chios Navigation (Hellas) Ltd.

phur Cap is to burn compliant fuel. This is the solution that goes to the root of the SOX emissions requirements. The problem, of course, will be that at least in the early years there are likely to be issues with respect to the availability of compliant low Sulphur fuels in sufficient quantities and locations around the world. It appears to me that the oil majors have been taking a little bit of a wait and see approach whilst monitoring the level of adoption of the scrubber option by shipowners. Conversely, the Owners have also been waiting to get an idea of the likely availabilities (and price differentials) of compliant fuels. This situation is perhaps not surprising given the multibillion-dollar investment decisions required by the oil companies in order to modify their refinery output and the multimillion-dollar investment decisions required by the shipowners in deciding whether to fit a scrubber or not. The result is that, unfortunately, we appear to be heading towards a rather chaotic period as the 1st January 2020 deadline rapidly approaches. Apart from availability issues, shipowners choosing the compliant fuels approach are likely to face issues with respect to the quality and compatibility of the different blended and/or treated residual grades and/or the distillate grades that they may use on board. At the same time, Oil Companies seem to be shying away from guaranteeing the quality of the compliant fuels they will be supplying to the market, leaving Shipowners to suffer the consequences of burning such fuels. Therefore, fuel management by the shipowners and by the officers and crew on board, which is already a very important part of ship operations, will become even more critical. Despite the efforts and guidelines that are being and will be provided by the various maritime organisations (e.g. IMO, ICS etc), I believe that, unfortunately, it is almost inevitable that there will be engine stoppages and breakdowns due to fuel quality and fuel compatibility issues as well as those arising from fuel management issues on board the vessels. This latter point, which concerns the safety of the vessel, ought to remain uppermost in everyone's mind.

the long-run solution to the 2020 Sul-



I believe that, unfortunately, it is almost inevitable that there will be engine stoppages and breakdowns due to fuel quality and fuel compatibility issues.

Scrubbers or more correctly, Exhaust Gas Cleaning Systems (EGCS), provide an alternative means of compliance with the 2020 Sulphur Cap. As you mentioned, the cost of supplying and retro-fitting scrubbers is large. The original uptake of this option was quite slow but now there is a substantial upsurge in orders. Nevertheless, there is a limited number of manufacturers of this equipment and already there is a significant backlog in orders as well as limited ship repair yard capacity, which would make it difficult for an Owner acting today to order and fit a scrubber on his vessel before the 2020 deadline. Choosing the scrubber option may also come with certain other concerns over and above price and availability of the scrubber itself, which include, for example, possible limitations on discharging washwater or storage of hazardous chemicals on board which may be required for the operation of the scrubber. Despite the large initial capital expenditure for installing scrubbers, I do believe that the price differentials between the high Sulphur fuel and the low Sulphur fuels and/or distillates will allow those who have chosen this option to recoup their outlay within a relatively short space of time (say about two years, depending on one's assumptions). I would expect that in due course high Sulphur fuels may be phased out altogether and therefore scrubbers on board vessels may indeed become obsolete.

A NAYTIKA YPONIKA 40

#### Perhaps reducing emissions from shipping may not be as complicated a task



Basil Sakellis
Managing Director,
Alassia NewShips Management, Inc.

The 2020 Sulphur cap is a complicated and much debated subject, and Mr. Rauta raises one of many good questions; some others include:

- Is the 50% GHG emissions reduction goal by 2050 (compared to 2008) set by the IMO too ambitious in terms of available technology?
- 2. Since the 1-Jan-2020 date was decided in 2008 with a provision for a ten-year review, should those stakeholders who are now raising objections have been consulted adequately a long time ago? Should the responsibility of finding a solution rest with ship owners or with ship builders? Or with oil majors?
- 3. Will conventional main engines be able to burn MGO for entire voyages?
- 4. Are the 0.5% sulphur content blends going to be stable/safe? How will effective enforcing of the quality of the new compliant fuels be put in place? And will such blends be available in sufficient quantities? And at what price? And in which ports? What does that imply for vessels' fuel tank and system arrangements?
- 5. What will be the differential in price between 3.5% HFO and these blends? And how will it evolve over time?

- 6. Which type of scrubber is the best? The (relatively) simpler and more economical, (open loop), which is still challenging from a technical point of view to retrofit/maintain, or the more complicated to operate and more expensive (closed loop/hybrid) type?
- 7. Are major shipping companies bowing to shareholder pressure when they announce that they will fit scrubbers on their entire fleets, or does such a move make commercial/financial sense?
- 8. Should owners who favour time charters view this matter differently to those who prefer the spot market? How is the decision affected depending on the type of vessel, where she trades, her age and the state of the company's balance sheet and available financing?
- 9. Is LNG fuel a long term solution? Or maybe other fuels (e.g methanol, ethanol)?
- Or would simply imposing a mandatory reduction in speed have practically been the best solution, with adequate and immediate positive results?

5% of the fleet, i.e. the vessels with the highest consumption, account for 38% of total fuel consumption.

Another interesting fact is that according to Norwegian shipping bank DNB, 5% of the fleet, i.e. the vessels with the highest consumption, account for 38% of total fuel consumption. Therefore, perhaps reducing emissions from shipping may in the end actually not be as complicated a task as the above questions may suggest.

All these questions will be answered in good time but, as is frequently the case in shipping, even though it is an industry where oftentimes there is no first mover advantage, these answers will come long after a decision needs to have been made by ship owners about how to satisfy the requirements of the new regulation.

Even though shipping is already by far the most environmentally friendly way of transporting commodities in large quan-





tities worldwide, from the very early steps of our development we at Alassia NewShips Management Inc. set protection of the environment as one of our major strategic goals and differentiators in the market, which is why since 2014 we have voluntarily adopted four ISO standards (including I400I - Environmental Management, and 5000I - Energy Management). Therefore, despite all the above, putting aside technical, commercial and political considerations, one thing is clear in my mind, and that is that there should be no delay in the implementation of the Sulphur cap. The shipping industry is taking part in an effort for a transition to a greener global future, and the sulphur cap is just one step in the right direction.

# The decision to invest in scrubbers depends to a large extent on the business case of the owner



Carl Schou President and CEO, Wilhelmsen Ship Management

The IMO 2020 regulation has driven many changes and development in the marine industry; we saw the development of new breed engines, new fuel, technological improvement on scrubbers as well as an entire value chain that provides many op-

tions for compliance. With the myriad choices for compliance, the majority of owners are confident they will be compliant within the 2020 deadline. Whichever decision is made in order to remain compliant, it will have a trade-off impact on ship operations and finances.

The decision to invest in scrubbers depends to a large extent on the business case of the owner. There are many aspects to consider when building the business case, such as technical and commercial feasibility. The average cost for the installation of scrubbers is approximated to more than US\$ 2 million, a substantial amount for most. The installation of scrubbers is also a highly complex process, it is estimated to be 5 times more complex than a ballast water treatment system installation.

Scrubbers may not be a sustainable solution to address the growing concerns about the global shipping sulfur emission.

Scrubber technology is not new, it has been in industrial use for almost a decade. However, the lifespan of scrubbers on-board is unproven at the moment, based on our experience on managing vessels with scrubbers for 4 years. We don't fore-see a need for the system to be replaced in the short term. Like any other system, scrubbers need to be maintained and operated according to maker specification. This is all part of day-to-day ship operations when you have the right processes and management.

Scrubbers may not be a sustainable solution to address the growing concerns about the global shipping sulfur emission. It is like a band-aid solution that could temporarily curb the current situation. In order to fix this, we need an overhaul in the value chain. In an ideal world, systems onboard are made to operate on low sulfur fuel and refineries produce only compatible low sulfur fuel. This is of course something we can say in an ideal world.

NAYTIKA XPONIKA



# The 2020 Sulphur cap emission rule and its compliance is variously interpreted by the players involved



Dimitrios Heliotis
Chief Operating Officer & Technical
Director, Target Marine S.A.

The 2020 global Sulphur cap and the introduction of 0.5% S Fuel have brought with them intense discussions with opposing arguments as to the compliance method. The shipping industry assesses the various paths to compliance by considering both the technical and the commercial considerations.

There is no black or white answer to this very complicated issue. Exhaust gas cleaning Scrubber systems in terms of SOx abatement in combination with SCR NOx removal have long been applied to the land-based coal and oil-fired electricity generation power stations with very good results. However, shipping has a different scope of application. A ship is on the move, passes through various climatic zones, is manned by shifting crew patterns that have a wide variance in their competency, and above all, is subject to a very volatile operational environment compared to the static conditions of land-based installations. Normally, one would expect that such a fundamental and cataclysmic change of fuel oil use for marine applications would be accompanied by a phasing out of the "dirty fuel". Instead, the desulphurization of the fuel, via so-called alternative means, is diverted to be done on-board the ship, creating by default a variety of engineering and logistics problems that are not consistent with a "normal" ship operation.

In addressing our industry's SOx emission regulations, shipping should apply unified and sustainable long-term solutions.

It is true that although scrubbers come with high CAPEX and OPEX, once the assumption of the price differential of the fuels is correct, they make commercial sense with their high ROI. Maintenance, however, is unpredictable due to the complexity, as are the effects of the yellow/brown plume and stack emission opacity issues and the discharge of Sulphur/combustion products in the sea. Extra CO2 emissions from additional energy requirements to run the pumps and side equipment are also expected. On the other hand, strategic investments in the world refining industry are coming and will add new plants with upgraded bottom capacities. Will the HSFO as a dying stock be a profitable commodity over the next decade? Will it be around in sufficient quantities, in dedicated storage, to satisfy the Scrubber thirst of several thousand shipping units equipped with scrubbers? And all this at a heavily discounted price; it remains to be seen.

My opinion is that the owners have the option to choose any method of compliance they prefer according to their commercial needs and trading patterns. Fleet type and vessel age will be very important decision-making parameters within the next few years. However, I believe that the main compliance path should have been directed from the top regulatory level in order to achieve a unified, transparent and sustainable solution. Instead, we see that the introduction of the 2020 Sulphur cap emission rule and its compliance are variously interpreted by the players involved, leaving once again the sustainability of our industry vulnerable to parameters and distortions beyond the direct control of Shipping. I agree with Dragos that in addressing our industry's SOx emission regulations, shipping should apply unified and sustainable long-run solutions. The shipping industry, come 1st January 2020, must be supplied with sufficient quantity and quality specification MARPOL Annex VI compliant Fuel Oil product of 0.5% Sulphur.

\* The opinion and views expressed are those of the author and do not necessarily reflect the company's views on the matter.

## The scrubber is a very risky investment for owners



Panos A. Kourkountis
Technical Director, Sea Traders SA

The fuel CAP on the 1st of January 2020 brings to the shipping industry a strong feeling of uncertainty regarding the quality, availability, and cost of the new compliant fuels. Under these circumstances, and anticipating a high price for compliant fuels, some rush to embrace the installation of scrubbers that will enable them to continue using cheaper fuels after January 2020.

The environmental impact of the construction, installation, logistics, and operation of a scrubber has already triggered an intense debate. The main commercial challenge is the price difference between the high sulfur fuels and CAP compliant fuels. The technical challenges are far more complicated. The regulatory framework is blurry and still being elaborated.

44



#### TURBO GENERAL

**GENERAL TURBOS MACHINERY & SPARES** 

TURBOCHARGERS - SPARE PARTS - INSPECTIONS - SERVICE - REPAIRS - REPRESENTATIONS

GREEK PORTS (GR)
CYPRIOT PORTS (GY)
DUBAI (AE)
SHANGHAI (CN)
CONSTANTA (RO)
ISTANBUL (TR)
DURRES (AL)

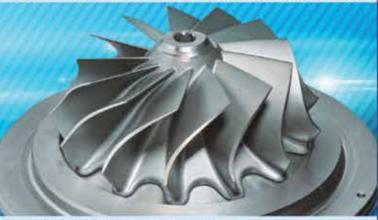


ABB | MAN | MET | NAPIER | PBS | KBB | HOSLET | KKK | SWITCHER | IHI | B&W



AUTHORISED DEALER

#### **EUROPAFILTER**

KEEP IT CLEAN

Oil cleaning

A simple solution for an invisible problem





#### **Maritime claims**

Complete

Consultancy on hull & machinery claims



#### One filter - Three functions!

#### DEEP FILTRATION

Traps all types of particles, both large and small, down to 100 nano (0.1 micron) from the oil.

100 Nano (0.1 micron)

#### ERADICATES OXIDATION

Removes oxidation particles from the oil and cleans your oil system interiorly.

Clean Oil Clean Machine

#### ELIMINATES WATER

Absorbs both free and bound from the oil.

Free and Bound











235 Irinis Avenue, Perama 18863 Piraeus Greece Tel: (+30) 2104002725 Fax: (+30) 2104005709 request@turbogeneral.com request@europafilter.com.gr



#### **HEADLINING STORY**

There are no proper performance standards and the makers have the freedom to use a variety of materials and construction standards. Except for the SOx levels, there are no clear requirements on the other substances emitted or discharged by open loop scrubbers. There is also a lack of proper studies on the environmental and health impact of the scrubbers. This has sparked reasonable objections by environmental organizations and authorities. Do the scrubbers form and spread bacteria as stated at various forums on the internet?

The installation of a scrubber is neither an environmentallydriven solution nor an environmentally friendly one.

It is also uncertain whether the discharges of open loop scrubbers will be allowed in the territorial waters of all countries and whether ports will have reception facilities for the waste generated by close loop scrubbers. Land-based scrubbers are provided with filters but there are no specific requirements for the installations on board ships. Furthermore, there are no IMO approved scrubbers. Be reminded that the first BWTSs, though IMO approved, are not in compliance with the latest IMO and USCG standards. Should we be surprised if the scrubbers have a similar fate? It is certain that the technical issues will sooner or later be addressed, creating lists of acceptable and non-acceptable systems. Would it not be better to work on these technical issues now than pretend they do not exist?

The installation of a scrubber is neither an environmentally-driven solution nor an environmentally friendly one. It is a commercially driven decision for short-term profit. Thus, it is expected that after a few years (or perhaps months) the initial upheaval caused by the introduction of the new compliant fuels will be normalized and the price difference between the new and old fuels will be gradually reduced to the point that the installation of a scrubber will not be financially sustainable.

Due to the above uncertainties, the scrubber is a very risky investment for owners. Unless the installation is financed by charterers and backed by a long-term charter contract, very few owners will be willing to step in alone.

## The installation of scrubbers might be a solution for the short term



Costas Stavropoulos
Technical Manager Ship Management
Division, "K" Line LNG Shipping (UK) Ltd.

Hundreds if not thousands of pages have been written on this topic with some of the writers leaning towards the installation of scrubbers on board vessels and others leaning towards the use of compliant fuel. In my opinion, the installation of scrubbers might be a solution for the short term as the vessels will be able to continue trading using the fuel they have used until now. The fact remains that there are a number of uncertainties that exist currently making the decision very difficult. There is not enough information as to the availability and quality of the compliant fuel and the current problems faced by a large number of vessels demonstrate the importance of the required quality as never before. At the same time the difference between the price of the current fuel and the compliant fuel is also a big unknown factor making it difficult to estimate the pay-back time of an investment in scrubbers with some voices in the shipping industry estimating a time period

of about 3 years and others a time period as short as a few months.

If we truly wish to cut Sulphur emissions in the long run, ship owners and oil companies should turn to other technologies.

The 2020 Sapphire Cap was established in order to reduce Sulfur emissions in an effort by humanity to recreate (or rather return to) a cleaner and more sustainable environment. The long-term use of scrubbers - and I am talking about the "open loop" scrubbers which I understand will be installed in the majority of the vessels whose owners have made the decision to make this large investment - will only achieve to remove the Sulphur from the air but deposit it into the sea. In my opinion, it is only a matter of time before the individual ports and /or countries, especially those with a higher environmental sensitivity, react negatively to the "open loop" scrubber technology. California in the US has already declared that this technology will not be acceptable in its waters. I believe soon other ports /countries will follow and I think that the stance of China. where there are already discussions about this issue, will cause a major impact in the future of scrubber technology.

Based on the above, I think it is obvious that I agree with Mr. Rauta's opinion that scrubber technology is not a long-term solution and if we truly wish to cut Sulphur emissions in the long run, ship owners and oil companies should turn to other technologies such as use of LNG fuel, or low Sulphur but good quality fuel.



#### **PURIMAR**™

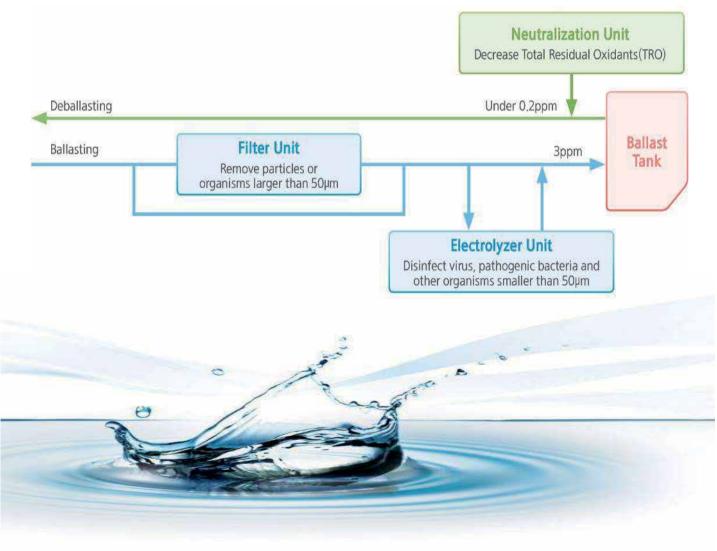
#### SAMSUNG HEAVY INDUSTRIES SAMSUNG







- USCG Approved
- Autocleaning Samsung Filter
- Low operation and maintenance cost
- Optimized Retrofit
- Worldwide service network
- European Training and Spare Parts Center in DCSI premises in Piraeus



#### Scrubbers can significantly mitigate the cost impact from the 2020 Sulphur Cap



Ioannis Chiotopoulos
Regional Manager- South East Europe,
Middle East & Africa, DNV GL – Maritime

Every owner is looking to identify the most economical and competitive strategy for sulphur cap compliance. Scrubbers can significantly mitigate the cost impact from the 2020 Sulphur Cap. Scrubbers are a technically feasible solution, but good system design and material selection are critical to minimizing downtime.

Based on DNV GL's research a SOx scrubber installation may prove to be the most cost-efficient choice over a ten-year period. It must be noted, however, that the industry's experience with respect to scrubber technology is mainly in the passenger and ro-ro sector, i.e. vessels operating in ECAs. However, the interest in installing emission reduction systems, especially scrubbers, has risen dramatically in recent months. And we are seeing that bulk, tanker, and container vessels are the segments with the most installations, overtaking cruise vessels which had been the early adopters. This indicates that many owners are choosing scrubbers to comply with emissions restrictions.

DNV GL has significant experience now in the installation of scrubber systems, working with customers that represent some 40% of the total installed and operating to date. This has given us some insight into key areas that need to be considered both in the planning and installation phases,

along with processes for optimal operation. We suggest working with an advisory partner to select and review the manufacturer and installing yard as well as developing a robust project risk management process to support the installation plan. This will help to reduce risk.

A SOx scrubber installation may prove to be the most cost-efficient choice over a ten-year period.

Installation of a scrubber system can be complex, in particular for retrofits. It is very important to understand how the system works in practice and how it interacts with the engines and other auxiliaries of the machinery system. This is where the use of HIL or Hardware-In-Loop testing can reduce the risks related to commissioning and automation. In HIL testing, the control system is isolated from the real system and instead put into a laboratory. HIL can detect hidden software errors, errors in configuration parameters, and design flaws in the software. This cuts down the risk of needing to troubleshoot errors or reconfigure the system, which can be both time consuming and costly.

The proper operation and continued optimal performance of a scrubber rely on both the successful integration in the vessel and a well-trained crew that knows how to maintain the system and how to do proper maintenance to be able to show compliance. Some key areas include having reliable monitoring equipment for both exhaust gas and washwater as these are the basis for showing compliance, marinized measuring devices, and attention to the corrosive nature of the washwater, components in contact with this must have sufficient corrosion resistant properties. Finally, the training and qualifications of the crew are important. Safety precautions and proper procedures are vital, as the crew may not be familiar with this equipment carrying out these processes on-board.

There are many uncertainties for the future. However, it might very well be that scrubbers can be a cost saving and safe solution as the fuel market transitions into a "new fuel normal" situation.

#### There are currently two Exhaust Gas Cleaning System certification schemes



Stamatis Fradelos
Business Development Director, ABS

From a statutory perspective there are two Exhaust Gas Cleaning System (EGCS) certification schemes which apply the following concepts:

- Scheme A based on initial emission performance unit certification together with a continuous check of operating parameters and daily exhaust emission monitoring
- Scheme B based on continuous exhaust emission monitoring together with a daily check of operating parameters

In both cases, the condition of discharged washwater used in the scrubbing process is to be monitored and recorded.

In principle, the Scheme A route provides a way to deliver a pre-certified EGCS to the ship. Scheme A certification includes a provision for "serially manufactured units". This requires the EGCS manufacturer to have an agreed 'Conformity of Production' in place which approximates to a 'type approval' process whereby a Manufacturing Assessment or equivalent would be used to ensure components and systems of the EGCS are built under quality control. Regardless of any simplification for serially manufactured units, the approval of an EGCS unit is still a serial-based ship specific approval that leads to a ship specific

48 ® NAYTIKA XPONIKA

#### HYUNDAI **ELECTRIC**







- A, B, C, D Frame (85~150KA)
  - Fixed & Draw Out Type
- Compliance with International Standards















STAVROS KASSIDIARIS S.A.

KASSIDIARIS BUILDING 97, Aghialou & Aegaleo Str. 185 44 Piraeus GREECE





equivalency notification by the flag to IMO. However, it is our experience that manufacturers have generally not been able to undertake the Scheme A approval route because of the difficulties of providing representative test bed testing. For these and other reasons, the preferred route has historically been the Scheme B route.

In both EGCS certification schemes the condition of discharged washwater used in the scrubbing process is to be monitored and recorded.

Under Scheme B the EGCS is effectively a 'black box' and it is only the monitoring system and the EGCS documentation that is approved prior to installation. The responsibility of continual compliance is with the operator and the certification does not include a quality review of the scrubber. ABS has applied Scheme B certification by inspecting the EGCS and monitoring installation to ensure compliance with the approved documentation and verifying air emissions and water quality in sea trial operation. The flag is then notified of equivalency and the ship's International Air Pollution Prevention certificate updated.

From the Classification perspective, we would draw your attention to the additional requirements and notations that may be applied through the ABS Guide for Exhaust Emission Abatement, which includes typical Class requirements that may be applied for EGCS safety and reliability aspects not addressed by the IMO requirements. ABS applies additional requirements through plan review and survey process for system redundancy, material suitability, monitoring, alarm and emergency shutdown system, electrical power and computer-based systems and equipment certification. Such ABS involvement will help to enhance the operability, reliability, quality, and safety of the EGCS.

#### In scrubbers, the design criteria are typically project-specific aiming to satisfy permitted SOxemissions



Dr. John Kokarakis
Technology & Business Development
Director for the HBSA Zone,
Bureau Veritas

The most critical aspect in the commissioning process of a scrubber is to have the Sulphur Emission Control Area (SECA) Compliance Certificate after performing successfully in a series of tests. The tests are performed with both high sulphur (3.5%) and low sulphur (1.5%) heavy fuel oil to verify that the scrubber system efficiently removes SOx from the exhaust gases. The measurements are thus part of the certification process and must be performed by an accredited independent body. The approvals cover the safety of the installation as well as the performance.

In BWMS, Type Approval alone has been found to be inadequate to ensure compliance with the convention. A large percentage of installed systems have epidemic deficiencies and suffer from various operational malfunctions. IMO has decided to augment the type approval process with a sampling and testing requirement during the commissioning process, formalized at MEPC 73 in October 2018. Type approval certification means that a man-

ufacturer can produce and deliver components without any other actions from Class based on their own quality systems. Not even drawings and calculation reviews are required for every produced unit. Tests must be witnessed and signed by a qualified department of the maker. Type Approval applies to a series production of equipment whose critical components remain unchanged (as opposed to surveying every unit).

Quality Assurance certifications for scrubber systems would be a step in the right direction.

In scrubbers, the design criteria are typically project-specific aiming to satisfy permitted SOx-emissions. The details of the scrubber arrangement/mechanical drawings/P&ID explaining the system and which engines are connected, as well as a parts list and a description of the functions, should be included with statutory approval. Manufacturing works should be approved by Class. Components must be expertly manufactured following wellproven modern technical practice. Quality control should be arranged to ensure that manufacturing and products meet the specific requirements. Records of manufacturers and testing should be kept as part of an internal quality control system. Materials should adequately meet the heat requirements, be free of defects and of adequate weldability. An assessment of the safety hazards introduced by the system must be done including any proposed mitigation measures. Hazards might include high back-pressure, corrosion, and loss of containment of hazardous chemicals, fire, overpressure, and flooding. Typically, the documentation required for the review is a mixture of equipment construction drawings and schematic drawings of associated systems and must be based on the actual installation. A comprehensive risk assessment of the system must be done. Evidently, Quality Assurance certifications for scrubber systems would be a step in the right direction. Generic Type Approval alone is not adequate.

50 AAYTIKA XPONIKA

#### For scrubbers, some kind of certification would be needed for the peace of mind of stakeholders



Theodosis Stamatellos

Marine & Offshore Regional

Manager- South Europe, Lloyd's Register

We many times co-mention Ballast Water Treatment (BWT) and Scrubbers, mainly in view of the financial load they add to vessels in combination with the market outlook which has not been great during the last years. Any lessons learned through a comparison between the two should, however, mainly be focused on how Regulations are discussed and adopted, and the width of the perspectives taken into consideration. The two hot topics have differences, the first being mandated as is, while the second is only one of the possible compliance methods. Still, however, both are treatment systems that need to be confirmed effective from the outset and then through life to meet the statutory obligations and Regulation intent. They also both need to be installed and operated in a way that does not compromise the safety of the ship.

Scrubbers, being a method indirectly approaching the 2020 regime - a scrubber does not solve emissions at their source but provides a way for pollutants not to eventually reach one of the to-be-polluted parts of nature, the air - are subject to concerns as regards design, effective-

ness over time, architecture of interaction with the ship's systems, operation, maintenance, back up and reliability, monitoring of actual use of the system etc.

Scrubbers, being a method indirectly approaching the 2020 regime, are subject to concerns.

One could immediately reach the conclusion that some kind of certification would be needed for the peace of mind of stakeholders. Usual challenges between Type Approval (TA) and Product Certification (PC) exist for scrubbers as for

other equipment. TA proves that the design of the system can be built to meet the performance standards, but it is reliant on the manufacturer following the specification during the production, which is then confirmed through an annual audit. PC gives an additional level of assurance by introducing 3rd Party inspection during manufacture and acceptance testing of each individual unit. It is not straightforward to advocate one approach over the other but for safety or operationally critical components you would obviously wish to increase the level of assurance that it meets the required standards and it is indeed difficult to think of any reliable alternative way of reaching the needed level of confidence for ensuring the Regulation actually has the effect intended.



# Shipowners are already making decisions on how to adapt their fleets through different approaches and technologies



Spyridon A. Zolotas

Marine Greece & Black Sea Area

Director. RINA

2020 is ahead of us and the new global sulphur limit of 0.5% m/m in fuel oil used on board ships set by IMO will have a massive impact on the marine industry. The regulation, coming into force on 1st January 2020, will involve approximately 75% of global marine fuel demand and by significantly reducing the amount of sulphur oxide emanating from ships is expected to have major benefits for people and the environment.

All shipowners are already making decisions on how to adapt their fleets through different approaches and technologies. The available alternatives to meet the new regulations are the use of low sulphur fuel oil, the use of alternative fuels (LNG, hydrogen, ethanol, batteries etc.), and the installation of SOx abatement systems, commonly known as scrubbers. RINA is actively involved in projects related to all of the technologies available, such as the new Carnival cruise ships that will be I00% LNG fuelled built at Meyer Werft shipyards or the LNG powered ferries built by Visentini for Balearia.

Furthermore, up to now, more than 50 RINA classed ships (mainly cruise ships and ro-ro pax) have already been fitted with scrubbers, and experience for the approval and installation works is also being gained during operation.

Scrubbers are certified according to Directive (EU) 2017/306 or 2015/559 and tested according to standards set by IMO Res. MEPC 184(59) or 259 (68), while each individual installation is provided with MED certificate. Therefore, the certification framework for the

proper performance of the systems on board exists, but their efficient operation relies on continuous maintenance and mainly on the adequate preparation and training of crew members on these new systems.

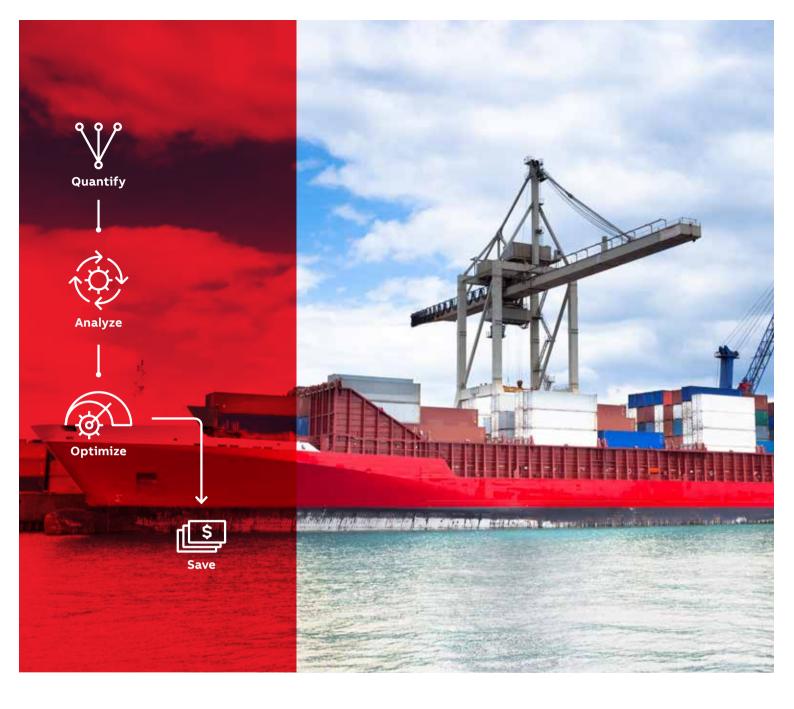
Classification Societies, as RINA, are here to assist both during the preparatory phase of the selection of proper technology according to ship type and operating profile, as well as later during installation and operation of the systems.

The certification framework for the proper performance of the systems on board exists, but their efficient operation relies on continuous maintenance and mainly on the adequate preparation and training of crew members on these new systems.

Fortunately, the time has come for new digital tools to be at the disposal of the ship managers and operators to assist in the optimization of their fleet performance. RINA Cube and its Fleet Operating Center recently launched a holistic approach to all these new challenges.



52 • NAYTIKA XPONIKA



#### **ABB Ability™ Tekomar XPERT**

All you need to improve performance and save fuel.



#### Global Warming: A review of Alternative Marine Fuels\*





By Panos Zachariadis, Technical Director, Atlantic Bulk Carriers Management Ltd.

Most "alternative" fuels are being promoted as "clean burning". This may be true for their emissions affecting human health only (SOx, Nox, and PM). But a positive picture is being presented for these fuels regarding also their GHG footprint, something that most recent studies are strongly challenging. It seems that the lifecycle footprint of nearly all proposed "alternative" marine fuels is poor and, in most cases, worse than current conventional liquid fuels (IFO, MGO). Thus, their being considered "transitional" or "bridge" fuels towards decarbonization should be seriously questioned. Below are the most "popular" of such alternative fuels, noting that most originate from Natural Gas (hence the more detailed discussion on NG).

54 

● NAYTIKA XPONIKA

#### Natural gas (NG)

#### and Liquefied Natural Gas (LNG).

After extraction from the ground, NG needs to be treated to remove impurities and is then cooled in stages to -I62 C where it becomes liquid (LNG). The liquefaction reduces the volume of natural gas by a factor of 600 allowing it to be stored in insulated tanks (which nevertheless need to be 3-4 times larger than standard liquid fuel tanks). Obviously, the purification and liquefaction require large amounts of energy. The CO<sub>2</sub> intensity of liquefaction alone is 0.2 – 0.4 kg CO<sub>2</sub> released for each kg LNG produced.

Natural gas is about 90% methane and Liquefied Natural Gas is about 95% methane. Methane is 86 times worse than CO<sub>2</sub> for 20 years after release in the atmosphere. For a time period of 100 years it is 34 times worse (not 25 as is usually stated) but in this case, the 100-year horizon is irrelevant and wrongly used. Pound for pound emitted today, the Global Warming Potential (GWP) of LNG for the next 5, I0 and 20 years is respectively II6, II0 and 86 (times worse than CO, in warming the atmosphere). This is an important point because using the proper GWP factor of 86 (instead of 25) immediately reverses all claims of LNG having a "better" GHG footprint than standard liquid fuels when one considers that some quantities of gas will invariably escape unburned to the atmosphere.

When natural gas is burned in the engine, it should produce about 20 % less CO. than a conventional liquid fuel but this assumes perfect combustion, which exists only in chemistry text books. In real life, a sizeable quantity of natural gas remains unburned and is emitted to the air along with the combustion exhausts. This escape - called "methane slip" - occurs in large amounts in the vast majority of marine engines (4-stroke and 2-stroke dual fuel or Otto cycle spark plug engines) rendering them immediately worse than conventional liquid fuel engines (even when the mild GWP factor of 25 is used!). For some latest type high-pressure combustion engines, methane slip is stated to be very small but, in any case, multiplying even very small amounts of methane slip by 86 brings these new engines also on a par with existing conventional ones. EU regulators are taking notice and, already, exhaust after – treatment options are being discussed, involving methane oxidation or capture devices at the stack.

But these leaks at the engine are perhaps the minor ones. To these methane leaks due to incomplete combustion, we must add the methane leaks before the engine (pumps, piping, storage, bunkering, transportation) and, most of all, during the extraction of the gas from the ground. These leaks invariably occur and they are huge. The bulk of recent (post 2013) scientific literature indicates that LNG's lifecycle Global Warming effect is much worse than that of conventional liquid fuels (diesel, heavy fuel oil) and may even be worse than that of coal! It is now accepted among most experts that if methane slip from the whole LNG lifecycle (extraction to combustion) exceeds 3% then LNG becomes worse than coal in Global Warming effect. And, unfortunately, actual measurements in the US show an overall average escape to the atmosphere of 3.6 - 7.9% at the extraction shale gas fields and 4% escape at conventional gas fields. Of course, gas producers claim that leaks from the fields are only I-2%. However, that has been discredited in many recent studies by researchers' actual measurements.

Including transportation, distribution, etc. the worldwide lifecycle methane leak is estimated at 5-7% of the total NG production. Current Natural Gas production (2017) is about 3 billion tons (3,670 billion cubic meters). Even assuming just a 4% lifecycle leak (instead of 5-7%), multiplied by a GWP of 86 it results in over 10 billion tons CO2e yearly, which is currently unaccounted or largely underestimated. Let us remember that the total man-made CO<sub>3</sub>, which we are trying hard to reduce, is estimated at 36 billion tons per year (of which ships contribute about 0.8 billion). Considering the above, LNG as ship fuel should be viewed only as a SOx and -for some engines- a NOx compliant fuel. But in Global Warming effects, it is clearly worse than conventional liquid fuels. Methane currently contributes 40% of the heat effect of all human-made Greenhouse gases as calculated using the 100-year GWP. And at the 20-year timescale, total global emissions of methane are equivalent to 80% of global CO, emissions. Furthermore, while

To reduce GHG by any meaningful amounts we need new technology (better batteries, synthetic fuels, synthetic bio-fuels, etc.).

CO<sub>2</sub> in the atmosphere has increased by 35% in the last 300 years, methane has increased by more than 150% since 1750. It seems methane (NG and LNG) is a bigger problem for the planet than CO<sub>2</sub>.

#### Hydrogen

About 95% of the world's hydrogen originates from Natural Gas using "steam methane reforming", whereby steam under high pressure and in the presence of a catalyst produces hydrogen and carbon monoxide which subsequently, using a "water-gas shift reaction", produces CO and more hydrogen. One kg of hydrogen produced in this process releases 9 - 12 kg CO<sub>2</sub>. Obviously then, the GHG issues described in the previous section on NG and LNG are also applicable to this hydrogen, and more so due to the CO, intensity of producing it from Natural Gas. Hydrogen, when burned, emits no CO2, no SOx and small amounts of NOx. Thus, it is potentially a viable alternative fuel, provided the CO<sub>2</sub> intensity of its production could be reduced (e.g. by capturing and storing the released CO<sub>2</sub>) and provided several technological and safety problems could be overcome. Nevertheless, its origin, being mostly methane, results in the potent GHG effects related to methane's lifecycle (methane slip, etc).

Only about 4% of the world's hydrogen production originates from water electrolysis. However, even this hydrogen cannot be considered clean, since electrolysis requires large amounts of electricity which usually comes from the city's electric grid. Only if this electricity originates from renewable sources (solar, wind) could the hydrogen produced be considered carbon-neutral. About 55 kwh are required to produce I kg of hydrogen. I kwh of electricity, when produced from a coal burning power plant, generates about

I kg of CO<sub>2</sub>. The US average is about 0.69 kg of CO<sub>2</sub> per kwh, while China and Russia produce most of their electricity from coal and most other countries from diesel oil. At an estimated worldwide average of 0.80 kg CO<sub>2</sub> per kwh, 55 kwh to produce I kg of hydrogen from electrolysis emits 44 kg of CO<sub>3</sub>!

The technology required to enable the use of hydrogen is still in development. It is not an easy fuel to handle, transport and store. The boiling point of liquid hydrogen is -253 C thus cryogenic tanks are required for storage. Depending on applied pressure, the size of the tanks needs to be I0-I5 times larger than those of standard liquid fuels. Finally, due to its volatility, several safety issues need to be resolved.

#### Methanol

Methanol is also mostly produced from Natural Gas, in a process similar to that of hydrogen. Thus, the above GHG issues (methane slip of NG) are also applicable, including the large carbon intensity of steam methane reforming. Methanol is liquid at atmospheric pressure and so it is easier to handle than hydrogen, a fact that has sparked renewed interest in its use as marine fuel. However, it is toxic and has a low flash point of only I2 C. Therefore, several safety barriers must be employed. Although methanol produces negligible SOx emissions, its NOx emissions are not down to Tier III levels. The lifecycle GHG emissions of NG-derived methanol are higher than liquid fuels (HFO, MDO) and more so when the proper GWP of 86 (20-year time frame) is used. For methanol to offer any substantial GHG reductions, it has to be produced from biomass using renewable energy (wind/solar), something that for the time being is unrealistic.

#### Ammonia

Ammonia is produced from hydrogen by adding nitrogen to it. Nitrogen is obtained from the air through liquid air distillation or via an oxidative process. Thus, in addition to the GHG effects of hydrogen and NG (being the primary origin of hydrogen), the CO<sub>2</sub>/GHG effects of nitrogen synthesis must be added to ammonia's lifetime GHG footprint. The advantage of ammonia over hydrogen is that it can be stored as a liquid in an easier temperature

to maintain (-34 C) while, being a hydrogen carrier, its liquid form allows more hydrogen storage per cubic meter. Ammonia used as fuel could result in GHG reductions, provided that it is processed using renewable energy and is sourced from electrolysis-hydrogen using renewable sources.

#### LPG

Liquefied Petroleum Gas (LPG) is the liquid propane and butane. Propane and butane are the first light distillates during crude oil refining by an amount of about 4% and they are also found in the Natural Gas fields in amounts of I-5%. In the latter case, they are collected as a byproduct of Natural gas extraction. LPG combustion results in no SOx and about 10 - 15% less CO<sub>2</sub> than fuel oil. However, its Global Warming Potential is three to four times higher than CO2, so any LPG leakages to the atmosphere are damaging. For two-stroke marine engines NOx tier III requirements are not met, thus EGR or SCR equipment is needed. Liquid Propane has a boiling point of -42 C and butane a boiling point of 0 to -IOC. Thus, they are rather easy to store and transport in

It seems that the lifecycle footprint of nearly all proposed "alternative" marine fuels is poor. Thus, their being considered "transitional" or "bridge" fuels towards decarbonization should be seriously questioned.

pressurized or semi-refrigerated containers. Overall, however, the GHG reduction potential of LPG is modest, while its limited availability prevents it from playing a major role as a global shipping fuel, being practically a by-product of oil refining or LNG extraction.

#### Biofuels (Ethanol, Bio-diesel, etc.)

Biofuels are fuels produced from organic material (e.g. biomass, plants, animal waste, etc). Depending on the assumptions and data used, studies on the effectiveness of biofuels to reduce GHG vary widely and it is not clear whether the energy used in the day to day farming and the production and use of fertilizers, pesticides, and herbicides required to produce bio-fuels offsets their GHG combustion benefits. Further, they have several downsides, one being the requirement for large agricultural lands which may result in a reduction of food supply, deforestation, and other environmental damage. One consequence of this damage is the associated loss of plant and forest carbon sinks, as well as cost increases in food. The California legislature recently stopped considering corn ethanol as carbon neutral and started the process to repeal the incentives for its production (May 2018). In addition, concerns of air quality exist as the combustion of biofuels produces carcinogenic chemicals such as formaldehyde and acetaldehyde. Brazil's Rio, where use of ethanol for cars is common, has 160% more formaldehyde and 260% more acetaldehyde in the air than cities where ethanol fuels are not used. For marine use, caution is advised since some biofuels oxidize and degrade due to

bacteria development when stored over long periods. Attempts to produce "engineered" biofuels from crops such as algae have so far proved unsustainable, while any production of large-scale biofuels (e.g bio-LNG or ethane from agricultural and animal waste) is not considered realistic for the near to medium term future.

#### Epilogue

The environmental life cycle impacts of each proposed alternative fuel must be carefully considered to assess if these fuels can deliver meaningful GHG reductions. It is unfortunate that many studies under-estimate the true up-stream and combustion GHG effects of most alternative fuels by, among others, ignoring real measured data on methane slip or by using reduced (100-year) GWP factors. Of course, there are no easy solutions toward shipping's GHG mitigation. But, on the other hand, it would be unfortunate if the sector gets locked-in to "solutions" with worse lifetime GHG foot-

print than current conventional fuels. To reduce GHG by any meaningful amounts we need new technology (better batteries, synthetic fuels, synthetic bio-fuels, etc.) Until then, our current conventional liquid fuels (IFO, MGO) have the smallest GHG footprint of all the above "alternative fuels".

#### Sample References

- (I) A bridge to nowhere. Robert W. Howarth, Department of Ecology & Evolutionary Biology, Cornell University, Ithaca, New York 14853, 2014, Energy Science & Engineering published by the Society of Chemical Industry and John Wiley & Sons Ltd.
- (2) Methane Emissions from Natural Gas Bunkering Operations in the Marine Sector. James J. Corbett, Ph.D. University of Delaware, Heather Thomson, Ph.D. University of Delaware, James J. Winebrake, Ph.D. Rochester Institute of Technology, US MARAD, 21 November 2015.
- (3) DNV GL Strategic Research and Innovation, position paper 03-2015. The Fuel Trilemma: Next generation of marine fuels.
- (4) American Energy Society, 2018, Methane Emissions: This Year's Biggest Energy Challenge: https://www.energytoday.net/environmental-health-impact/methane-emissions-years-biggest-energy-challenge/
- (5) IMO MEPC 69/INF.10, 26 January 2016, study of the use of Methanol as marine fuel.
- (6) "Decarbonizing Maritime Transport: Pathways to zero carbon-shipping by 2035", OECD, at https://www.itf-oecd.org/decarbonising-maritime-transport
- \* Credit: This article has drawn from the following book/chapter: Psaraftis, H.N., Zachariadis, P., "The way ahead", Chapter I3 in Psaraftis, H.N. (ed.) "Sustainable shipping: a cross disciplinary view" Springer (2019) in press.



#### becker marine systems



#### **RELIABLE**

Our proven rudder systems are the perfect choice for all types of ships. A tough working environment requires a sturdy, well-customised design combined with superb manoeuvring capabilities. Seasoned captains trust in Becker rudders for their reliability, safety and exceptional manoeuvrability.



Right: MSC New York
Container • built 2014
LOA 399.0 m • 16,652 TEU
Becker Twist Rudder with bulb













### Life onboard a fully electric RoPax ferry

RESHAPING AND REDESIGNING EVERYTHING
WE KNOW ABOUT THE VESSELS OF THE FUTURE?

The fully electric RoPax vessels Gloppefjord and Eidsfjord that serve on a popular fjord ferry line operated by FjordI started their journeys in January 2018. The two vessels link the 2 km crossing between the villages of Anda and Lote in the Norfjord of Norway on a daily and continuous basis. The zero-emissions ferries, which have a length of 106 meters each and can carry 120 automobiles and 349 passengers on the 8-minute journey, were designed by a Norwegian company but were built in Turkey and classified by DNV GL.

The ferries' energy consumption is 60-70% lower than a conventional diesel fueled ferry's. The vessels' battery autonomy can last up to three hours, while there is a diesel engine available in cases of emergency or for longer journeys. *Naftika Chronika*'s editorial team visited Anda and travelled on one of the two fully electric ferries and while onboard met with Capt Asle Hundeide, Capt Kjell Olset and Chief Engineer Harald Leite and talked with them about the operational enhancements and challenges that a crew faces on board an electric ferry, the idiosyncrasies of the Norwegian coastal shipping industry as well as the ongoing changes in ship design and technology and the way they will affect mariners' workload and education in the near future.

Capt. Asle Hundeide and Capt. Kjell Olset of Fjordl ASA talk to Ilias Bissias and Charis Pappas



#### What are the main innovations of these two electric vessels?

#### ASLE HUNDEIDE

The two sister ferries actually serve the world's first 100% electrically powered ferry line, between the bays of Anda and Lote. The charging of the batteries takes place every time the ferries reach one of the two ports. Of course, they can also complete a back and forth trip without charging, but then the vessels would have to stay longer in the charging dock, as they would have consumed more battery. Our battery indicator is quite similar to the one of a smartphone.

#### KJELL OLSET

I believe that these types of vessels are better than the conventional ones. There is a very quick maneuvering system and the respond to the engine is faster. This has to do with the use of electricity as power. The engine rooms are also quite different in comparison with a conventional ferry. They are actually very small for vessels of this size, but there are quite big battery rooms next to the engine rooms. Due to the use of electrical power, the vessel is also much quieter than a normal ferry. Normally, there is no sound at all-except for the sound of the thrusters. In both docks, there are automated vessel mooring systems, which enables both ships to be anchored rapidly and safely to harbor quays by using a vacuum system instead of conventional anchors.

#### What were the main difficulties that Fjordl faced while setting up this electrically powered ferry connection?

#### KJELL OLSET

Actually, there were quite a few things that had to be tested before setting those two vessels in operation. Most of the difficulties were related to the charging technology which was developed from scratch

and, therefore, had not been tested in real conditions.

#### Do the electric vessels need less crew?

#### ASLE HUNDEIDE

We are normally three officers and one able seaman. Of course, ten years ago a vessel of this type would most probably have more crew on board. The reason why less crew is needed is that ships are much more modern nowadays. They do not demand so much labor.

#### Is there any special training procedure for the seafarers who staff these new ships?

#### ASLE HUNDEIDE

I took formal training of about four full days in order to be able to use these new systems. Of course, I had some experience with modern maneuvering systems before. The most demanding part of the

60 AYTIKA XPONIKA



The vacuum system on shore- both ships are anchored rapidly and safely to harbor quays by using a vacuum system instead of conventional anchors.



Photo of Chief Engineer Harald Leite in the engine control room. Less crew is needed on-board those ships as they do not demand so much labor as 10 years ago.

training was the familiarization with the charging procedure. The training was not difficult, but the very different maneuvering characteristics compared to similar vessels could be challenging for any officer used to conventional techniques and procedures.

#### What happens when the sea gets rough?

#### ASLE HUNDEIDE

Well, the sea can get rough sometimesespecially at the coast. Extreme weather can be demanding. However, it is very seldom that we have to cancel a scheduled trip. The actual danger in rough seas is the unpredictable winds, in combination with the limited visibility at night. As you can imagine, navigation at sea depends a lot on eye sight. You have to see clearly, and in the night time there are many restrictions- and sometimes you have to face dense fog. That is why at night time there are always two officers on the bridge. It has to do with the safety of being two, in case one officer does not feel well or possibly even feels fatigue. Additionally, in rough weather, the ferries will normally consume much more electricity- even for this short trip.

#### What are the main differences between working onboard an electric ferry and an ocean-going ship?

#### ASLE HUNDEIDE

Before working on ferries, I was employed in ocean-going ships - both tankers and bulkers. Of course, there are plenty of differences. First of all, while working on ferries you have the opportunity to be close to your family. Wages are sometimes a bit less -around 30% less- but that is not always the case. Additionally, the quality of life is better on ferries, as you can sleep in your own bed at home frequently - and that is very important for any family man.



Photo of Capt Kjell Olset (in the forefront) and Capt Asle Hundeide.

#### Is the younger generation in Norway interested in pursuing a career in maritime professions?

#### ASLE HUNDEIDE

I believe that the younger generation in Norway is still interested in pursuing a career at sea. Of course, there are ups and downs in the maritime industry and, therefore, the demand for seafarers follows the same pattern. But I generally believe that the recruitment rate is pretty good. If my child would like to become a mariner, I would not advise him or her against it. That would be their choice. Of course, the sea can be challenging, but working conditions are a lot different now than they used to be 20 years ago.

#### **VESSELS OF THE FUTURE**



The battery room of the ferry- charging of the batteries takes place every time the ferry reaches one of the two ports.

These types of vessels are better than the conventional ones.
There is a very quick maneuvering system and the respond to the engine is faster. This has to do with the use of electricity as power.

Do you believe that in the near future we will see electric vessels in ocean-going shipping?

#### KJELL OLSET

Yes, I think so. We have already seen fully electric fishing vessels. Of course, I do not think that fully electric ocean- going vessels will appear in the near future, but for short trips -like day trips- we could see them operating very soon.

Maybe at the present time hybrid systems would be a more realistic approach for ocean-going ships, but as the battery tech-



nology gets better, we will definitely go for that. We might even see electric vessels navigating in the Aegean Sea, especially between islands or straits.

Battery technology could, of course, be a solution for airplanes as well. Especially for airplanes that regularly land in airports with very short landing runways and between steep mountains, where a quick acceleration is needed.

Why do you think shipping companies in Norway are investing in these very expensive vessels?

#### ASLE HUNDEIDE

I believe that it happens mostly for environmental reasons (ships in Norway should be emission free by 2024). The Norwegian government also wants to support the Norwegian hi- tech technology industry.





Diesel engine, used in case of batteries running out due to long trip or rough weather.

The Anda- Lote route is subsidized by the government. Of course, passengers pay a ticket but it does not cost much. The ticket would be much more expensive and the frequency of departures not as regular if the route was not be subsidized.

Could these two electric ferries be, except from electric, autonomous as well?

#### ASLE HUNDEIDE

Today, I do not think so. I do not see autonomous vessels coming in the near future, especially in passenger ferry routes. Passengers feel security when they know that the vessel is manned. I believe that to operate an autonomous vessel in a completely safe and reliable manner we still need about I5 years - mostly due to safety and security demands.

62 AAYTIKA XPONIKA





# GET THE FLEXIBILITY TO CARRY DIFFERENT CARGOES

#### Tankguard Flexline. Full-on flexibility for your cargo vessels.

In today's competitive marine environment, it's vital to obtain the commercial edge. Tankguard Flexline is a cargo tank coating with Flexforce technology, giving your vessels the flexibility to carry different cargoes – essential when only aggressive cargo types are available. More different cargoes. And less ventilation days after carrying aggressive cargoes. The result? Full flexibility, which means a full cargo vessel, and that's great for your business.



Get flexible. Get Tankguard Flexline.

#### Management skills are the most important asset for a shipowner







In his interview with Naftika Chronika on the occasion of the announcement for the launching of the new building Ro-Ro «Maria Grazia Onorato» - the greenest and the most spacious Ro-Ro of the Mediterranean - Italian shipowner Vincenzo Onorato answers questions on the future demand of Ro-Ro ships in the Mediterranean, the fierce competition in shipping, the importance of supporting EU seafarers and autonomous vessels.

Vincenzo Onorato, President of Onorato Armatori, talks to Charis Pappas What are, in your opinion, the major forces that will shape the demand of Ro- Ro ships in the near future, especially in the Mediterranean? Why are major players investing in green shipping today, despite the world crisis?

It is quite easy to make a forecast: highways are overloaded with trucks which leads to pollution and, even more importantly, accidents and loss of human lives. We are investing in 6 new buildings in order to help deal with these effects. We are aware that just 6 ships are not enough for the present market to develop and we are ready to do more because the highways of the sea are the only practical way to solve this continental problem.

I am glad the EU is paying so much attention to the pollution issue and we at Onorato Armatori are here to help solve the problem. My argument is that the EU is paying no attention to the crew lists of the ships regularly trading between European countries. Allow me to explain the problem by posing a ques-

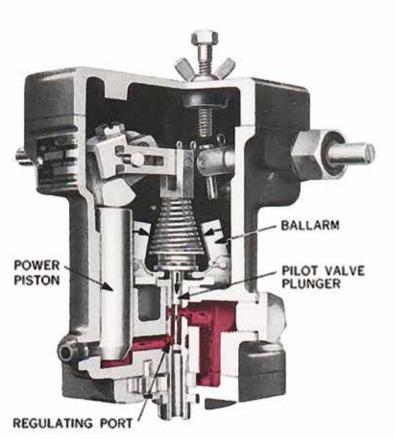
tion: is it fair that ships sail between Italy and Greece with non-EU crews that are paid less than one-third of a European crew's wages?

Can medium-sized, family-run ship-owning and ship-managing companies deal with the competition from multinational conglomerates that invest in shipping?

In today's shipping world, a fleet is worth its weight in gold but a fleet's management is worth even more. My sons represent the 5th generation of ship owners in my family. The vast majority of my Company's managers have been trained and have grown "in-house". Our first line managers are in their thirties, well prepared, hungry for success and very determined. So, the answer is certainly yes. Our group is proof that wise management, accurate monitoring of the market, the capacity to seize the right moments so as to support continuous growth, and business diversification (by constantly monitoring new markets, especially in the Mediterranean) are key to suc-

64 © NAYTIKA XPONIKA







#### **GOVERNOR Workshop**

B00Kyour seminar

seminars@maseurope.com



Recognized WOODWARD Training Facility

It's a common secret that when there is a problem on the engine of a vessel, people often blame the control or part of the engine they know less about.

Our seminars aim to educate the technical specialists in the governing systems in order not only to trouble-shoot any possible problems of the systems themselves, but also to take corrective actions (invasive) in order to protect the engine from a possible governor failure.

Wise management, accurate monitoring of the market, the capacity to seize the right moments so as to support continuous growth, and business diversification are key to success, especially when it comes to medium sized family-run companies.





cess, especially when it comes to medium sized family run companies. In any case, you must consider that our group, which is family managed, employees 5,000 people.

The southern parts of Italy face tremendous unemployment issues. Why isn't a career at sea a safe choice for young unemployed Italians?

The Italian Parliament approved the Bill that made the Italian International Registry possible many years ago. This Registry aimed at the expansion of the Italian flag and the employment of Italian sailors and officers. Italian shipowners obtained fiscal discounts in exchange for keeping the National flag flying on their ships and employing Italian crews. But this pact was not respected and too many Italian shipping companies, which benefited from the fis-

cal regime, are still employing under-paid non-EU sailors even on cabotage routes.

Ship-owning families have been the target of tax authorities around Europe and the shipping industry as a whole is being "investigated" by local and international Media, and the European regulators in Brussels. What is the situation in Italy today compared to other countries around the world that subsidize or support their industries?

Every European country has tried to keep their shipping and their flag alive by implementing special rules to cut shipping companies' costs. In my opinion, there has been too much abuse. The abuse in the Italian market mentioned above has to be investigated by the Italian government and the European Authorities.

Futurists claim that maritime technology will be in a position to develop fully autonomous vessels that will safely navigate the Mediterranean Sea within the next few years. Do you share this view?

That is nonsense! Would you sail on a ship with another 2,000 passengers without a well-trained crew? Can you imagine a large cargo transported around our coasts in a ship managed by a satellite? And this is the reason why the Onorato group is not just supporting Italian sailors but is investing in employing them as well. Recently we launched a new ro-ro vessel built by the Flensburg shipyard in Germany. We shocked several people because we decided to paint on the vessel sides an enormous sign stating "Onorato for Italian sailors": This is our philosophy and our reason for being shipowners.

66 • NAYTIKA XPONIKA



# GLOBAL EMERGENCY RESPONSE, WRECK REMOVAL, & MARINE SERVICES

COMPLIANCE: ALASKA APC | OPA90 SMFF | CHINA SPRO



## Celestyal Cruises continues to invest in the Greek market



According to CLIA, 27.2 million passengers will have chosen a cruise vacation by the end of this year. Considering that in 2009 there were I7.8 million global cruise passengers, it is obvious that the international cruise industry is booming. Chris Theophilides, the new CEO of Celestyal Cruises since June 2018, talks to Naftika Chronika about the future goals of Celestyal Cruises and the brand's strength in the international market as well as the importance of the cruise industry for the Greek economy.

Chris Theophilides, CEO, Celestyal Cruises talks to Panagiotis Kapetanakis Mr. Theophilides, how do you evaluate Celestyal Cruises' performance for this season, and what are your goals for the next few years?

During the current tourist season, Celestyal Cruises has managed to exceed its goals - more than 100,000 visitors to Greece have sailed with us on our two cruise ships operating in the Aegean. We intend to use this positive momentum as a foundation to extend our operating season until November and to thereafter nurture demand for year-round Aegean cruises. Another one of our goals is to expand our regional footprint so as to establish ourselves as the primary cruise line operator in the Eastern Mediterranean, which we will achieve by introducing new, destination-rich itineraries that showcase the best of the Eastern Mediterranean to the world.

Celestyal Cruises has experienced strong growth in recent years. What are the reasons for this, and what are your brand's strengths in the international market?

Celestyal Cruises is a truly global brand. We serve guests of more than I40 nationalities on our vessels, and our high-quality product wins awards every year. Over the years, thanks to our collective hard work and innovative ideas, we have managed to establish a dynamic brand. The key reasons for this are our value-for-money product and our all-inclusive cruises that combine legendary and "off-the-beaten-path" destinations: our vessels are a perfect size, as they give us the flexibility we need to call at both large and small harbors. This means we can convey our guests to some of the most beautiful, unspoiled areas in the Aegean, places where they can enjoy unforgettable experiences. Our Best Value-Best Service combination is what makes Celestyal Cruises outstanding. Our crew works continuously to provide our guests with a warm, welcoming and hospitable environment, one they can relax and feel at home in. Celestyal Cruises remains faithful to its goals: to make cruising an affordable option for everyone, and to offer visitors from all over the world the ultimate authentic experience of Greece and the wider East Mediterranean region.

Although Greece is the third-largest cruise destination in the Mediterranean, it has been unable to benefit from the number of visitors it receives in the way that Italy and Spain do. Can you explain why?

Greece is one of the most beloved destinations for tourists from all over the world and one of the most popular cruise destinations in the Mediterranean. The ports at most of the Greek islands do not have sufficient infrastructure to properly host cruise vessels - especially the new generation cruise ships with a capacity of more than 3,500 passengers. However, Greece will truly leverage the opportunities the cruise industry can provide once it renovates its port facilities, upgrades its services and draws the attention of investors to the value of investing in Greece. A cluster of at least six ports should be upgraded to receive newer generation cruise vessels which would give these destinations the opportunity to increase the flow of tourists and achieve real economic growth.





Last year Celestyal Cruises hosted 100,000 passengers of different nationalities, of which only 16 percent were Greeks. Why are so few of your passengers Greek?

While Greece is consistently one of the world's top cruise destinations, locals are still not so familiar with the cruising concept, and this unfamiliarity is the reason we see so few Greek passengers on our cruises. Celestyal Cruises continues to invest in the Greek market, and we are looking to initiate the people of Greece into cruising via promotional events in the Greek media. We have also launched marketing and advertising campaigns to familiarize Greek audiences with the concept of cruising in general and with Celestyal Cruises' Value proposition in particular.

Is it possible to extend the cruise season and expand cruise activities in Greece beyond the summer season? What concrete measures should the state and the cruise companies take to achieve that?

We are committed to extending the season to a year-round offering. This year, we will sail the Mediterranean until November. Greece is a natural gem and should be attracting tourists 365 days per year, and it

is in this spirit that we announced our extended 2019 and new 2020 itineraries. In 2019 our season will extend into December with our new 7-Day Eclectic Aegean itinerary; in 2020 we will continue our successful 3- and 4-Day Iconic cruises and further strengthen our 7-day itineraries by offering more choices to our guests. To extend the cruise season a fruitful cooperation between the Greek government, the cruise lines and the local communities is imperative, otherwise, this strategic goal cannot flourish. State participation is crucial, as government incentives are required to enable cruise companies and local businesses to extend their seasons and host more tourists during the winter months. In this respect, we are pleased with the high level of cooperation with the GNTO and the efforts of all parties to achieve the strategic goal of year-round cruising in Greece.

How does the Greek economy, especially the Greek islands, benefit from the development of the cruise market? As far as Celestyal is concerned, what is its "economic imprint" on the Greek economy?

Although cruising is a relatively new and fast-growing industry, especially in Greece, its benefits to the Greek economy are extremely significant. In addition to the guests' direct spending, there is also a chain of incoming revenue streams created by the operational requirements of the cruise vessels. Some of these are provisioning, bunkering, entries to archaeological sites, buses/taxes, guides etc. Celestyal Cruises has its operational basis in Piraeus and operates hundreds of calls every year at the Greek ports. Therefore, it has a significant contribution to the Greek economy with a total economic impact estimated at €140 million every year. In 2017 our direct operating expenditure was €30 million, while we supported Greek food & beverage companies with €5.5 million; our total expenditure for promoting and advertising Greece globally in 2017 was €3 million. We are also committed to employing local staff: we have more than 200 Greek seamen and marine officers on our vessels - this number corresponds to crew on 50 cargo ships - and more than 100 Greek office personnel onshore, thus maintaining the know-how and accumulated expertise of cruise operations within Greece. We also undertake our vessels' maintenance and upgrades in Greece, thus assisting the local ship repair industry as well. Celestyal Cruises is, therefore, a proud contributor to the Greek economy whilst also promoting the best of Greece to the world.

#### **INTERCARGO - ANNUAL GENERAL MEETING**





## Safeguarding the interests of dry cargo vessel owners and quality shipping

**INTERCARGO** held its Annual General Meeting and Executive and Technical Committees' meetings in London on I and 2 October 2018, along with a well-attended Dinner Reception on the first day. The meetings were chaired by Chairman John Platsidakis, Vice Chairman Capt. Jay K. Pillai and Technical Committee Chairman Dimitris Fafalios. During the press conference held immediately after the meetings, the current INTERCARGO Chairman Mr. John Platsidakis (member of the Executive Committee since 2002 and Chairman from 2012 until end of 2018), the newly elected (as of 01/01/2019) Chairman Mr. Dimitris Fafalios, the Vice Chairman Capt. Jay K. Pillai, and the Secretary of the Association Dr. Kostas G. Gkonis gave an in-depth analysis on current strategies and future goals for the only international, voluntary nonprofit association representing the interests of dry cargo vessel owners. INTERCARGO reiterated its commitment to a safe, efficient, high quality and environmentally-friendly dry cargo shipping industry and its support for an industry governed by free and fair competition.

Edited by Ilias Bissias

Transcripted by Angeliki Koliomihou



John Platsidakis: More and more regulations are coming. We made it clear to our members that we do support regulations which aim to protect the marine environment. There's no question about that. We fully support them. We want however to clearly underline the fact that we expect practical and implemental regulations. And this is our regret actually. We get the feeling that the Member States of the IMO do not pay due attention and they do not have expertise in the modus operandi of oceangoing tramp shipping. Either because the politically heavyweight countries are not related to that sector or because they are misguided by different sectors of the shipping community, namely cruise ships or coastal shipping or passenger shipping. Ocean-going tramp shipping is totally different. As you know, we trade worldwide, we come across different jurisdictions in the countries where we engage and we are subjected to far too many local and international regulations. Therefore, what we

are asking the regulators to do is to come up with very specific achievable and implementable regulations and talk with the industry in order to understand how we operate. There is no doubt that our sector is a quality one, in total we transport 90% of the world trade in a very cost - effective and safe way, and if the new regulations are to improve it, by all means, we are here to apply them. It is a misunderstanding, by the general public, that the ship is the guilty party in the equation, and this is not the case. The ship is, in most cases, the last link in a long chain. In terms of CO, emissions, it is the charterer who, in most cases, dictates the trading pattern of the ship as well as its speed. And those two determine the production of CO<sub>2</sub>. In the case of 0.5 sulphur bunkers, by all means, we are there to use them, but we expect the regulators to tell us where we can find them. It is something that was imposed on ships without considering whether bunkers will be available for us to use. We are not challenging

the role of IMO, I am I00% clear about that. We are hugely supportive and we fully respect what they are trying to do. The Secretariat certainly has a huge and very valuable experience related to shipping and we want to preserve it. It is the only entity that can regulate the worldwide shipping sector. What we have done over the last six years, when I had the honor of being the Chairman of INTERCARGO, is that we managed to bring together the members and the Secretariat. There is a very close collaboration between our very capable Secretariat staff and our members. The members have the means to present their concerns, and their problems and their opinions about what is happening in the shipping market and it is the duty of the Secretariat to convey these concerns, problems and opinions to various other for including the IMO. So, linking the two is an achievement of ours that has been rewarded with a very substantial increase in full members, associate members, and entered ships. When we

72.





## MDM MARAN DRY MANAGEMENT INC.



started some six years ago, we had around 900 ships and today we are close to 2,200, which represents about 25% deadweight in terms of global dry bulk fleet or around 20% of dry bulk ships.

Do you expect that shipowners will not want to join INTERCARGO because of the difficult conditions in a very poor market?

Iohn Platsidakis: It is not the cost factor: shipping companies have become aware that first of all they benefit themselves by being members of their representative association. Our costs are very low and very efficient, and we are proud to say that we are a very cost- effective association. Our Secretariat's full staff is only five persons nevertheless the volume of work which is produced is quite significant. As I said, the shipping companies joining INTERCARGO benefit themselves because they have the platform through which they can present themselves and at the same time they strengthen the voice of the Association to represent themselves and the industry.

Do you still believe that the industry is too fragmented and what has happened to the Round Table, INTERCARGO, INTERTANKO, ICS and BIMCO?

John Platsidakis: The Round Table is not

a legal entity, as you know. It was established some 20 years ago and was the brainchild of Frederic Tsao, the Chairman of INTERCARGO at the time, as he thought that, in order to have a more unified opinion about the shipping industry, we needed to get the various associations together. That's how the International Chamber of Shipping, INTERTANKO, IN-TERCARGO, and BIMCO ended up together. It doesn't mean that just because we sit together we necessarily have one voice, but we do try to bridge any gaps. The big challenge is how to make the public and, by extension, the representatives of the Member States at IMO aware of exactly what is happening in ocean-going tramp shipping. It is a huge challenge. Some people say you have to improve your PR. Ok, but it's not only a matter of going to

maritime publications and presenting your

case, because they are addressed to maritime people who happen to know more or less what is happening. It's difficult to go beyond that. But of course, it remains a big challenge. We have discussed a few things the last two days about how we can approach the decision makers more. It is an ongoing process.

Is this an INTERCARGO interest or is it a Round Table interest?

John Platsidakis: It is a Round Table one but, nevertheless, we have to do our own work.

**Dimitris Fafalios:** The Secretary General of ICS has changed, very recently, and there will be a renewed impetus with the Secretariats of INTERTANKO, INTERCARGO, and BIMCO which together make up the Round Table. Perhaps because of the ICS succession process, there was a reasonable amount of time for Peter Hinchliffe to phase out and for Guy Platten to come in. I think though there is a good understanding amongst the Round Table members and I think this will be strengthened. Taking the Chairman's point a bit further, I think that we definitely need IMO, and most definitely as our regulator. There have been questions the last few years as to whether the regulations being produced can be improved. Whether they can be made more practical. Whether in fact the whole make-up of IMO has now predominantly moved away from a maritime make up to a less maritime make-up and more NGO, I mean environmental NGO attendance. I first went to the IMO maybe 30 years ago. And at that time most of the delegations and most of the Secretariat were maritime people. We need to have more people who understand maritime issues more clearly. At INTERCARGO we are very fortunate, and that is because of the efforts of our Chairman and the Secretariat. We are a very compact organization. We are very close to our members. We don't have many committees. And even at the very highest levels, our members intimately understand the operations of the dry cargo tramp ship. And this is why we are very unique. Because I also sit on the ICS board I can say that at the very top decision-making level involved

What we are asking the regulators to do is to come up with very specific achievable and implementable regulations and talk with the industry in order to understand how we operate.

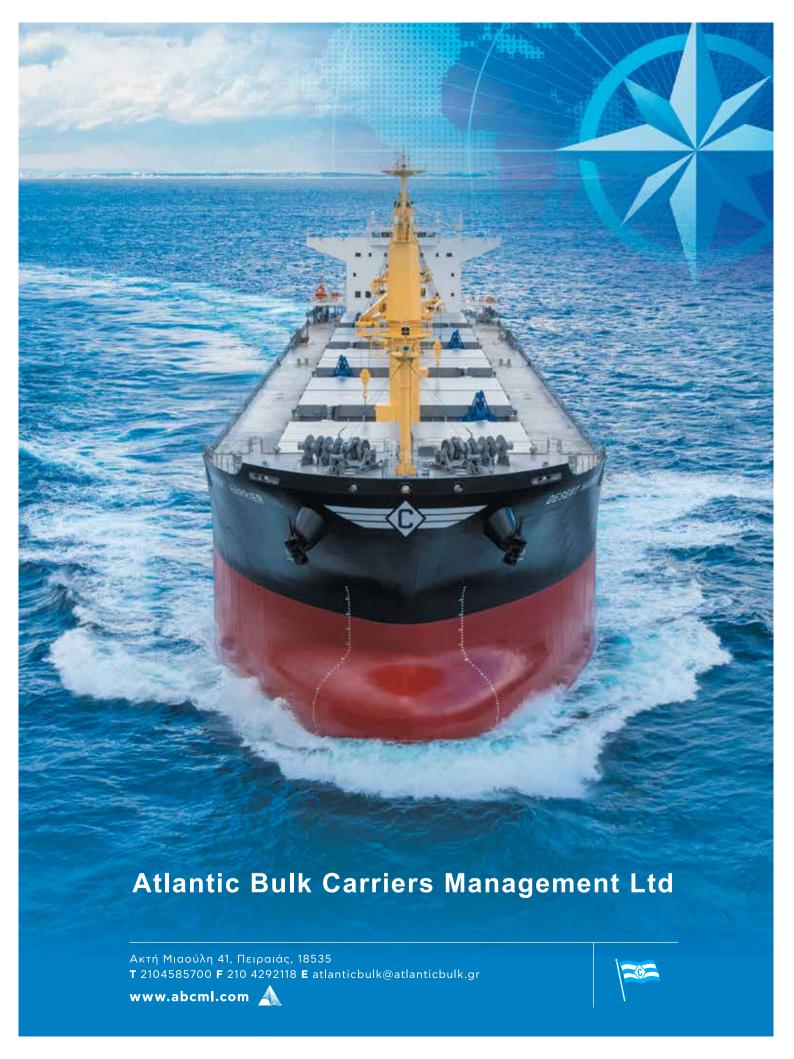
John Platsidakis

in these organizations there are people who once again are one step away from the frontline. At INTERCARGO, our more senior members are intimately involved in the operation of the vessels. I believe that in future there will be a very constructive dialogue between the Round Table and IMO to try to produce better regulations. The whole 2020 decision was about politics and the creation of a single report. It became very obvious, probably about a year ago, that the assumptions made in that report were quite far off the mark. Even though we have a very enthusiastic scrubber uptake at the moment, the number of scrubbers we will physically have on line by January 1st, 2020 is still limited. We have spoken to the oil supply industry and except from the oil majors, they can not assure us that they are going to have worldwide compliant safe fuel available. And this was very different to the premise that IMO used to make these decisions. However, we still believe that the Ist of January 2020 is achievable.

John Platsidakis: All that is said about 2020, however, depends on whether the other counterparties will react properly. If the refiners do not produce it, if the oil traders, and the oil suppliers cannot provide the oil bunkers, we can't do it. We are the last part of the chain. It has to be understood.

We used the example of the attitude of governments and the European Union as an entity. They are trying to regulate car

74 © NAYTIKA XPONIKA



emissions. They go to the car manufacturers. They don't go to the car owners one by one. In our case, they went to the ship and not to the ones who provide the product. It shows the lack of understanding which at the end of the day we can only explain as a lack of political weight. Ocean-going tramp shipping does not have a significant political weight. So, it's easy to impose all the burden on the ships but not on the ones who actually should be in the first line.

There are a couple of things, but maybe just for clarification. So, when the CAP was being passed in October 2016 what was INTERCARGO's position then?

John Platsidakis: There was no request to change the implementation date. Netherless, I read every now and then that we are asking for a change of the implementation date. We are not.

Dimitris Fafalios: Going back to 2016, the mood at the particular MEPC was more political. There was indeed a very strong political mood. Two reports were supposed to be submitted. The second report was not submitted and accepted as it did not quite comply with the IMO terms of reference for the study and therefore that report was not taken into consideration.

#### And that called for a different date?

Dimitris Fafalios: That didn't call for a different date, it called for a different scenario. It was much too conservative on its assessment of the oil industry's ability to supply the fuels from 2020. Now the issue was that we saw that whatever we said at that MEPC, was too politically charged. Russia was involved, the United States was involved. I think that unfortunately, all reason had gone out of the window. And if everything could be rewritten there would have been specific steps along the way that all the stakeholders in this process would have to take. There were no steps imposed on anybody except us the ship operators. The dates that have been imposed on us are the 1st of January 2020 and the 1st of March 2020. The oil supply industry is not regulated directly by IMO and it has not convinced shipping that it will be able to



supply safe compliant fuels worldwide in sufficient quantities. Also, ISO was supposed to provide the standards for the fuel but they've said very clearly, we will have a publicly available (interim) standard by the end of the 2019 and a full 8217 standard by 2022. So, all of the players are on different timetables.

John Platsidakis: The way it was approached by the regulators was a mistake. There should have been a joint working group discussing the applicability of what they are saying. They should have come and said "Listen, we will impose it. Can we discuss the implications? Can we find a way to address the real problems of those regulations, which we intend to vote?"

Jay K. Pillai: The industry was aware that the implementation date would be sometime between 2020- 2025. However, it was decided to implement from 2020. As seen with other regulations, IMO makes the compliance date (January 2020) ahead of the technological and operational experience, where the 0.5% low sulphur fuel oil (LSFO) is not available and its specifications in the ISO standard. That is where the problem stands. Ship Owners and Operators welcome the intent of the IMO regulation and want to comply for its environmental benefits.

But the concerns we are addressing are two-fold. One is the safety and compatibility issue from the 0.5% LSFO which is not consistently available worldwide and we are talking a complete change of the regulation ahead of the technological and operational experience with this fuel. There should have been an experience building phase prior to mandating the change from January 2020. As stakeholders, we do not have the ISO standards yet. Specifications will be available, by mid-2019, with just six months to go. The 0.5% LSFO has to be stable and compatible at bunker ports worldwide.

The second issue is the commercial implication. What will be the price of the fuel? I mean we transport the cargoes in a most cost-efficient manner and at a very affordable price to people, but the whole cost of the transportation is also going to go up. Somebody has to pay. The public or the consumers will have to pay. Therefore, it is important that the regulators had to think about the cost impact to the pub-

76 ● NAYTIKA XPONIKA







Winner of Lloyd's List Awards 2017 DRY CARGO COMPANY OF THE YEAR

#### **CARRAS (HELLAS) S.A.**

65,Akti Miaouli, Piraeus 185 36, Greece

Tel. +30 210 4587 000 Email crew@carras.gr

#### **INTERCARGO - ANNUAL GENERAL MEETING**

lic (the consumers) with due consideration of the technological aspect (production costs of <0.5% S fuel) of the regulation, in the most efficient transportation of essential commodities.

John Platsidakis: It has to be clarified to the public that it is the consumer who has to pay and he will pay. This is inevitable. You saw what happened recently with the announcement by Maersk that they will face an additional cost if they use the 0.5%, up to 2 billion dollars and that it will be charged to the shippers. And then the shipper associations said it is unfair. The consumer will pay at the end of the day, which actually is not bad, providing that he also understands what he gains.

For the past few weeks, a lot of people have been questioning the timing of your report proposing an experience phase. The first question is why did you do it now and not earlier? And the other question is, knowing the oil industry and their commitment to global supply, in your mind, how would that work?

John Platsidakis: I take it from another point, a different point from you. I would like to hear the regulators, the governments say-

ing publicly that in order to reduce the emissions (sulphur,  $CO_2$ ) they expect the oil refineries to produce the quantities needed. That way they would pass a message to their public that those industries that exist in their country and elsewhere are expected to play their role. Nobody asked them. Look at the  $CO_2$ . They expect us, the ship, to comply. With all the different reductions, 40%, 70%, you name them. But it's not the ship that determines the  $CO_2$  emissions. It is the charterers. Did you hear anything from the charterers about the reduction, did they commit to it themselves?

**Dimitris Fafalios:** In 2016 we were given a certain set of assumptions. It only became clear quite recently that the oil supply industry is not going to be able to meet these assumptions. And it was also very very clear that the safety implications were not fully understood until about let's say a year or six months ago. We are a fragmented industry, and the oil supply industry also appears fragmented because you have IPIECA, IBIA and you have the oil majors. And then again what percentage of the bunker market will the oil majors supply? Probably 30%, 40% at the maximum. So, we have fragmentation on both sides of the equation. We also have a regulatory process where we are trying to create an international regulation using national criteria. For instance, we have conversed with high level representatives of several maritime nations and asked them how they viewed 2020.

Replying they stated: "We went to our local suppliers, we went to our refiners, we went to our bunkers suppliers and they said oh we are fine". And then a question followed "Minister, with all due respect, what percentage of all the ships that are navigating around your coast line, what percentage of those ships have locally supplied bunkers on board"? The reply was "a very small percentage". This is an attempt to solve an international issue on a national level. In 2016 there were environmental reports of thousands of adults and children dying of sulphur poisoning from the sulphur emissions from ships. I can't remember which of the NGOs produced these figures. So how are you going to react to something like that? The sensationalist and unsupportable studies continued.

Has INTERCARGO accepted that RightShip has become a de facto standard or do you still object to certain of their assumptions?

Jay K. Pillai: It is a longstanding, sound and professional relationship. We communicate frequently and I think they have appreciated the fact that, because we are a sector- focused association and also because we have our quality entry criteria, any entered ship is a quality ship.

Dimitris Fafalios: There is nothing negative between us and RightShip. Well, we don't quite understand the Qi System, and we would like Qi to be a little bit more transparent but nevertheless, there is a very very good working relationship with RightShip.

John Platsidakis: We operate in a competitive market. And in order to survive, we will do our best. With the best available engine, the best available ship, the best available bunkers. As to CO<sub>2</sub> emissions, we don't manufacture engines, we don't produce bunkers, we buy whatever is available in the market. So, if the market can provide a solution, an improvement of what we have been doing, we will be the first ones to adopt it because of the fierce



78 • NAYTIKA XPONIKA

competition. We do not have an option. I mean if the shipyard manages to produce a ship of the lowest CO, emissions, we have to go and buy it. The public has to understand it. We don't buy the worst ship in the market because we don't care about CO as we have to compete against far too many players in an open market. There is no other market which is as competitive as ocean-going tramp shipping. Once a Commissioner of the European Union said, "You have to become digital, you have to do this and that". She thought she was leading the way. I said, "Commissioner, don't bother about it. If it is practical, if it is applicable to our operations, we would be the first ones to buy and adapt to it because the industry is so competitive".

As an organization, you have made clear that these environmental regulations and the Sulphur Cap are the results of political pressure that has very little to do with shipping. What can the associations do about that?

**Dimitris Fafalios:** IMO has developed a three- step approach and we are willing to

The oil supply industry is not regulated directly by IMO and it has not convinced shipping that it will be able to supply safe compliant fuels worldwide in sufficient quantities.

Dimitris Fafalios

follow that approach and to engage with the IMO and the working groups within IMO about what is needed as short-term measures and medium-term measures. As for the long-term measures, I have to say I don't know what the long-term measures are. We have spoken to people who are very very knowledgeable in battery technology and they' ve said to us very very clearly that for deep-sea ocean-going shipping, batteries are a no go. But they said to us one thing which was very interesting. The existing package that you

have of the diesel engine coupled directly to the propeller is about the most efficient plant on earth. Now what you' ve been burning in that diesel engine, that is another question. For instance, years ago VLCCs became diesel driven and then they became diesel driven with extremely slow turning propellers. The industry has made very very positive steps. Unfortunately, these steps do not create a linear improvement. And that's because of the nature of the business. It's the same with the car industry, it's the same with the airline industry.

What are the priorities of INTER-CARGO in relation to other major international developments?

John Platsidakis: The IMO has come up with a regulation that all ports should have adequate reception facilities to receive hazardous residuals of cargoes. 85% of ports today do not have any. The IMO cannot penalize the countries but nevertheless, they may come up with reports of what is available. If you go to a port today, in Lagos, for example, you



#### **INTERCARGO - ANNUAL GENERAL MEETING**

should know if you have zinc where to discharge it and have an indication of the cost. Another item is the complaints which we have been receiving from our members for the non-professional approach of various ports. As you know, there are areas where unless you facilitate, as we say, you cannot move on. It is one thing to say that it is prohibited to do so but if you want your vessel to leave on time what else can you do? So, as an initiative of INTERCARGO (followed by the Round Table as well), we are asking in writing the various MoUs to establish self- assessments entities within their own organizations, like the Police Force for example. If this happens, those entities will be able to monitor the performance of their own systems. We want to register in confidence our complaints without being afraid that we would be blackmailed.

#### What about accident reporting?

John Platsidakis: We are very much in favour of producing quality timely accident reports. We see far too many accidents without a report or reports issued many months later on. We all want those reports in order to improve our safety performance. So, we expect again IMO to come up with regular publicly available reports.

## Do you think the nickel ore problem a few years ago is now more sorted out?

John Platsidakis: Indonesia has reduced the volume of nickel ore exports because they want to process it locally and have added value to the cargo, so fewer shipments are happening. Certainly, there is some kind of awareness, a better awareness, but the problem exists.

**Dimitris Fafalios:** INTERCARGO has done a lot of work on this, firstly with cargo specialists, secondly in conjunction with the IG and thirdly with members of the IMO Secretariat. We have visited Indonesia, we have visited Malaysia.

We visited the Philippines, although the region from which nickel ore is shipped in the Philippines is a dangerous place. So, I think we have learned a lot about the



From left to right: Mr. Dimitris Fafalios the newly elected Chairman of INTERCARGO (as of 1/1/2019), Vice Chairman Capt. Jay K. Pillai, Mr. John Platsidakis, Chairman of INTERCARGO and the Secretary of the Association Dr. Kostas G. Gkonis.

cargo, I think we have learned a lot about the ship dynamics. First of all, liquefaction. But in any case, I think INTERCARGO is part of a big team of organizations that are still learning about nickel ore.

Kostas Gkonis: Any crisis is like a coin, it has two sides: there is an opportunity side as well. The 2008 crisis was unexpected, and any upside opportunities were largely associated with luck.

I see 2020 as the single biggest and most far reaching development affecting our industry post-2008 and this time we have a date moreover, we know in advance when it will happen. Thus "2020" has the elements of a crisis with, moreover, the opportunity side for calculated profit-making. It is legitimate of course for free-enterprise market players to make their commercial decisions accordingly and seek profit.

INTERCARGO is not concerned with commercial decisions, we are concerned about Quality shipping based on the two pillars of safety and environmental soundness. The '2020 regulation' is welcome as it is environmentally driven, but when it

comes to compromising safety, then we have an issue. It is not acceptable for interests that have a say and responsibility in relation to safety to be indifferent against any prospect of a potential safety compromise.

It is important that the regulators had to think about the cost impact to the public (the consumers) with due consideration of the technological aspect (production costs of <0.5% S fuel) of the regulation, in the most efficient transportation of essential commodities.

lay K. Pillai

80 • NAYTIKA XPONIKA



Blue Planet combines traditional Greek shipping values along with an innovative spirit. The vessels are equipped with contemporary technology devices that enhance the level of safety and protect the environment.

In close cooperation with Anemoi Marine Technologies, Blue Planet
Shipping is the first company worldwide to manage a bulk carrier equipped with wind rotors based on the Flettner principle.



**BLUE PLANET SHIPPING LTD** 

5-7, Ag. Nikolaou str. 18537, Piraeus, Greece

**T:** +30 210 4599010 **F:** +30 210 4518857

**E:** info@blueplanetshipping.gr

www.blueplanetshipping.gr

# Marichem Marigases launches innovative fuel oil treatment products in response to the increasing needs of the maritime market



Marichem Marigases Worldwide Services has been manufacturing and providing quality chemicals and gases to the shipping and other industries for many decades. The company is totally committed to meeting the ever-growing needs of the maritime industry and especially the international fleet. Whether it is meeting the constantly rising expectations in quality, efficiency, and flexibility or satisfying the demands placed by environmental legislation and strict seaworthiness, Marichem Marigases is up to the challenge.





An interview with Matthew More, Environmentalist

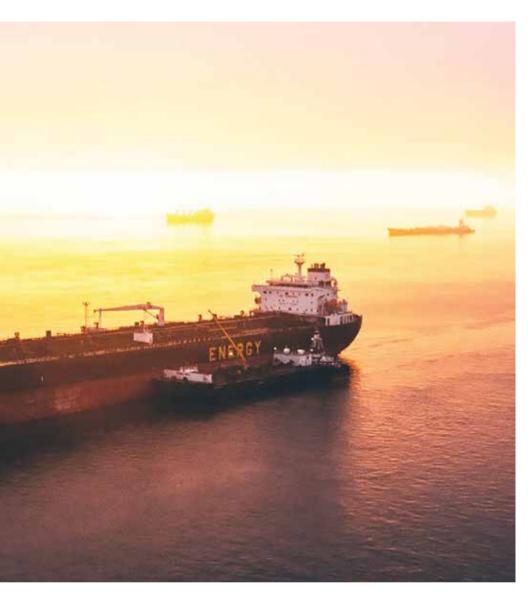
Nowadays, we hear more and more about marine fuels and the new legislation governing emissions. What is your company's position and how do you respond to the increasing needs of the maritime market?

From 2020, the Global Sulphur limit will be reduced to 0.5%. Due to the increased costs and concerns in terms of Low Sulphur marine fuels availability, vessel operators are obliged to reduce emissions under International Maritime Organization (IMO) regulations. A common option is the use of exhaust gas cleaning systems (EGCS), often referred to as scrubbers. However, scrubbers constitute a doubtful solution due to high costs, the necessity to modify the ship design and the reduction of the cargo space. Even if a ship man-

ager prefers scrubbers, it is broadly known that vessels will still have to use Fuel Additives to improve engine reliability and performance, to enhance fuel economy and reduce maintenance costs, meeting with the current emission requirements.

Marichem Marigases is proud of its research and technology centre, through which new products are formulated in response to the increasing needs of the maritime market. Over the years, the experience and knowledge of our specialised scientists in our laboratories constitute the basis of developing new products that not only meet the norms and standards of the international community but also surpass the specified regulations and advance to the next generation of innovative products. One indicative example is our newly launched series of Fuel Additives.

NAYTIKA XPONIKA



That sounds interesting! Could you tell us more about this new series of Fuel Additives?

Reducing the level of sulphur compounds in the Marine Fuel Oil can reduce the ability of the oil to lubricate the injection system of the engine, causing the fuel injection pump to seize. Lower lubricity can significantly increase the wear of fuel pumps, valves and injector nozzles over

meet every customer's needs and are the following:

1. F.O.T. – ULS provides superior lubricity properties to the Ultra-Low Sulphur

an extended period of use. We have de-

veloped five different Fuel Additives, which

**1. F.O.T. – ULS** provides superior lubricity properties to the Ultra-Low Sulphur Fuel Oils (content ≤ 0.1%) in order to avoid the aforementioned eventualities. Furthermore, it prevents problems associated with the accumulations of injection deposits.

**2. FUELFLOW PPR** is a revolutionary Fuel Oil Treatment product that prevents the formation of wax structures and is suitable for all distillate fuels. It is a highly concentrated fuel additive specifically designed to reduce/depress the Pour Point - the temperature at which a fuel becomes solid - and prevent the formation of wax structures.

Regarding marine distillate fuels, a notable move towards fuels with higher wax contents has been noticed and consequently, this leads to worsening cold temperature operability. As more ships are sailing through polar waters and as new hybrid and Ultra-Low Sulfur Distillate Fuels are becoming available in the market, there is an increased risk of wax formation which can make fuel unpumpable.

As the temperature in the fuel decreases, the molecules of paraffin tend to come together, forming large structures which will degrade the flow characteristics of the fuel. Modification of the crystallization of the wax is necessary to maintain the fuel at a liquid condition and avoid solidification in extreme conditions.

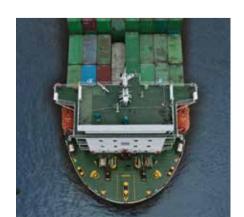
FUELFLOW PPR is suitable for all distillate fuels and secures no paraffin crystallization at very low temperatures/arctic waters. When using FUELFLOW PPR, the fuel remains liquid and easy to handle/pump. This product has been tested by independent laboratories, which have verified the reduction pour point and cold filter plugging point (CFPP) by an average of 21°C and 11°C respectively after its use.

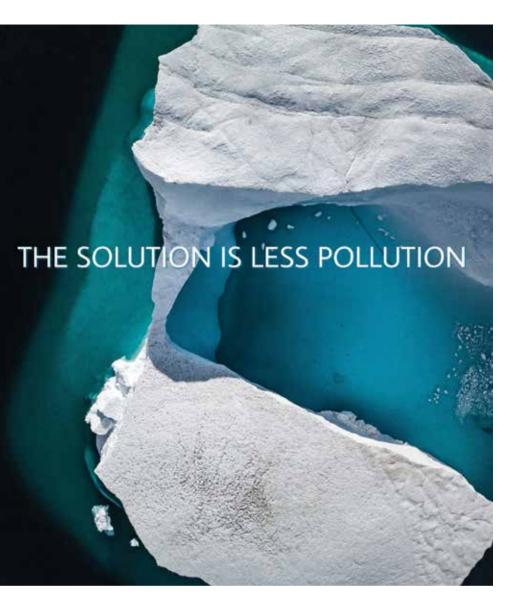
#### 3. F.O.T. C-100 NEW GENERATION is

a uniquely concentrated product, containing advanced organometallic compounds, specifically designed to increase fuel energy and reduce combustion deposits. This new innovative formula combines superior quality components, which result in its catalytic action as a fuel additive and deposit eliminator, to be used in all types of diesel engines operating with heavy fuel oils (HFO).

This special product is engineered to eliminate heavy metal depositions such as Vanadium and Lead contaminants in the fuel. These deposit eliminators are very effective in changing the ash composition, during their reaction with heavy metals' depositions. This, in turn, leads to the prevention of low and high temperature acid corrosion on sensitive surfaces.

**4. F.O.T. 10 NEW GENERATION** is a concentrated liquid blend of active ingredients, which can be added to all marine fuel grades. It acts as a catalyst to improve combustion and maximize energy release. At the same time, it keeps the fuel oil





stable and homogeneous, leading to improved combustion and better compatibility and stability.

This unique product catalytically reduces the amount of exhaust particulates and inhibits the formation of acid gases, therefore leading to a reduction of acid and acidic gas emissions to the environment.

**5. F.O.T. NEW GENERATION** is a newly-developed, concentrated fuel oil additive, specifically designed to facilitate the handling and burning of all types of heavy fuel. Our New Generation product disperses and dissolves sludge, suspending high fuel particles into a solution. In this way, fuel blends become homogeneous, leading to improved combustion, and vastly reducing any compatibility and stability issues.

One main benefit of our F.O.T. NEW

GENERATION is its highly concentrated nature, which results in lower dosage requirements and greater cost saving.

## Apart from chemicals and gases, what else does Marichem Marigases offer?

Marichem Marigases is one of the leading companies in the international marine chemicals and gases industry, manufacturing and providing high quality marine chemicals, coatings, chemical equipment, gases, and refrigerants, cutting and welding machinery, accessories and equipment, fire-rescue and safety services to the shipping industry.

We offer a variety of products at more than 2,100 ports, supplied by a distribution network of 196 stock points, 24 hours a day, 7 days a week, 365 days a year. The efficient operation of our network is backed up by decades of experience from dedicated marine experts, operating according to ISO I400I, thus ensuring Marichem Marigases' commitment to the environmental responsibility, quality management, product efficiency, high - standard services and safety to the customers. The company also sustains a big network of service engineers, who offer the essential technical support in all major ports and elsewhere worldwide.

## What differentiates you from your competitors?

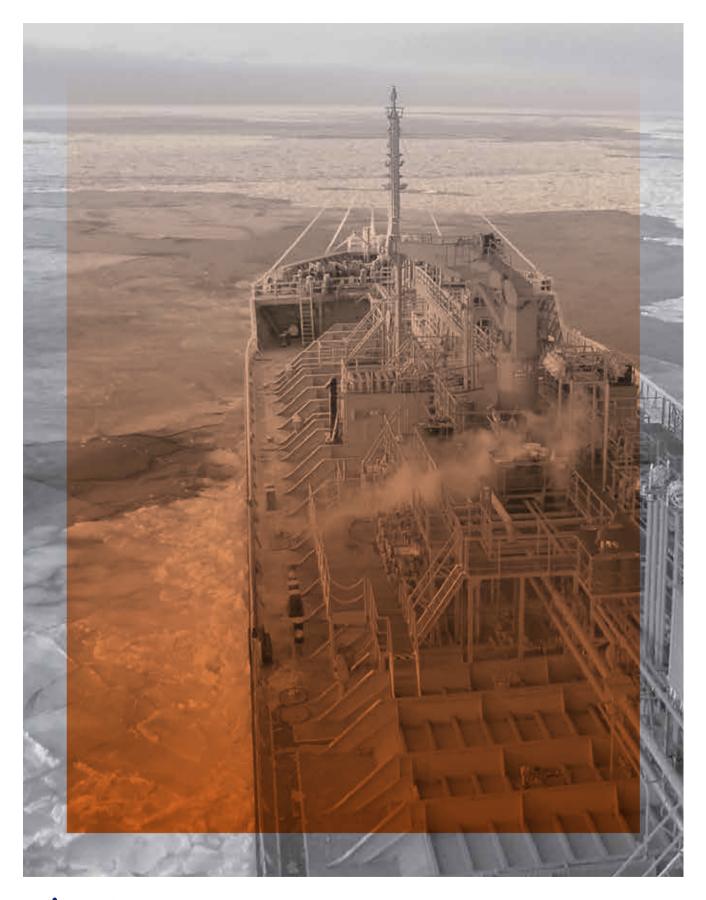
Since its start-up of operations, Marichem Marigases has maintained a people-centered philosophy, with consistency, work ethic and respect towards the vessel, her crew, her operator and the environment. At the same time, Marichem Marigases is famous for its prompt and efficient services, which are considered to be one of our assets. Furthermore, the immediate response to the international fleet's current needs and the ability to foresee its future requirements have led the company to evolve into a main player on the world stage of the global market.

#### What about your ecological footprint?

The Worldwide Services of the company have been at the forefront of promoting environmental consciousness within the chemical industry, throughout all stages of production, starting from the raw materials, the manufacturing process of the products and their handling, through to the final disposal on board the vessel. We continuously strive to meet the marine industry needs, whilst we decrease our environmental footprint.

In addition, not only do we care about the environment, but also for our employees and customers. Marichem Marigases has adopted the international best practice in relation to risk management and ensures health and well-being of employees, distributors, and the public, offering great opportunities for workplace safety for the people involved. Needless to say, our company already holds OHSAS 18001 Occupational Health and Safety Management Certification by Bureau Veritas Quality International (BVQI).

84 © NAYTIKA XPONIKA





Partnership Relationship

Leadership

Singapore | Shanghai | Hamburg | Limassol www.columbia-shipmanagement.com

# Balloon Payments in the shipping industry: Opportunities for owners and/or threats to the industry





**Dario Bazargan**Director, International and Economic
Affairs, SEA Europe



Yannis Syrigos
Chief Financial Officer, Iolcos Hellenic
Maritime Enterprises Co. Ltd.

China undoubtedly possesses a globally recognized shipbuilding capacity. With the current overcapacity of cargo ships, however, keeping all those shipyards "busy" is not an easy task. As a result, China appears to be creating artificial demand and introducing alternative methods of financing in order to continue to offer orders to its domestic shipyards.

Balloon payments seem to be one of the financing methods gaining popularity amongst Asian banks that finance the construction of ships in Asian shipyards while offering some degree of flexibility to shipowners. However, EU shipyards claim that this type of financing is distorting competition among shipbuilders and might be risky because it attracts market players who are not financially strong. Naftika Chronika has asked distinguished members of the maritime industry with extensive knowledge on issues related to shipping finance to present their views on balloon payments and other similar flexible options for financing newbuilding vessels, as well as their thoughts on the possible effects these financing methods might have on the market.

Edited by Charis Pappas

## Balloon payment scheme could attract less qualified market players

#### Dario Bazargan,

In order to pursue the target of a global agreement on export credits (between both OECD-countries and non-OECD countries), the International Working Group on Export Credits was created in 2012 as an international – global – negotiating forum. Since then, discussions in such forum have been addressing both horizontal and sector specific issues - including inter alia shipbuilding - with the final aim to reach an agreement on export credit terms and conditions ("IWG Understanding").

SEA Europe has been strongly supporting the establishment of an international ship-building export credit system between both OECD-countries and non-OECD countries which could foster transparency and a global level playing field. SEA Europe advocates a balance between keeping ship financing attractive and avoiding the over-utilization of the system and the risk of creating leeway for less qualified market players.

A "selection process" should remain alive to avoid the generation of speculation bubbles, e.g. market participants entering the market for a short term only. Against this background, SEA Europe considers that any form of balloon payment scheme should be avoided to prevent the possible risks of attracting less qualified market players. Under balloon payment schemes, the exposures of the Export Credit Agencies and the financing banks etc. would increase since the repayments would be a) generally lower and b) received later.

Additionally, SEA Europe considers "any form" of balloon payment scheme as very critical since a structure like a limited balloon payment scheme finally changes the repayment profile and might "invite" some participants for circumventions — even if certain precautionary measures like the weighted average life of credit term are incorporated. Finally, balloon terms would be very difficult to determine.

## Just because Chinese banks are offering ample money doesn't mean we have to take it

#### Yannis Syrigos,

As a member of the ship owning community, I must point out that any kind of subsidy on shipbuilders is extremely harmful to the market, as it provides incentives for Owners to "shoot themselves on the foot", as they usually do. Especially after the last crisis, which was the deepest one in recorded history and was mainly because of the shipbuilding frenzy of the years prior to it, one would have thought that the shipping industry had learned its lessons. It seems however that we aren't any the wiser and we continue on our self-destructive path as if history has taught us nothing!

Ultimately, the decision to borrow money and, moreover, where to funnel that money (in a newbuilding or a secondhand vessel) lies with the Owners.

Therefore, as a general comment, I wish to emphasize that it is the individual shipowners that are to blame for the overcapacity, not the yards. If shipowners had refrained from ordering new buildings, letting demand beat supply, they would be making so much money from operating their older tonnage that they wouldn't need incentives in the first place.

As far as the specific issue is concerned, it is quite surprising that EU shipbuilders are raising this matter. Until the year 2000, European shipyards were themselves beneficiaries of subsidies at a time when the European Commission was fighting hard to abolish such support – effectively putting the tombstone on the already embattled European shipbuilding industry. An industry which probably would have died of

"natural causes" anyway, since the labour costs of European shipyard workers could not have competed with those of some of their Asian colleagues. Neither could the cost of raw materials, or our much stricter environmental laws.

But can "balloon payments" really be considered to be incentives? In my opinion. the answer is "no". First of all, technically speaking, it is not the shipyards that are offering financing. It is Asian financial institutions. And why wouldn't they? Chinese banks are flooded with money and they are not facing the same -irrational- over regulatory blizzard that their European colleagues are confronted with -which give off the impression that the European Central Bank has purposely put in motion some perverted scheme to drive banks out of the lending business. True, most Chinese banks are state-owned; thus, one can claim that -indirectly- it is the Chinese Government supporting the shipbuilders. But the Government is not "subsidizing" anything: the costs of obtaining financing from a Chinese bank are the same (if not higher) as taking a loan from any European bank - and the terms are stricter too.

Secondly, by utilizing loans with balloon payments, are Asian banks doing anything out of the ordinary? Again, the answer is a definite "no". Balloon payments have been the rule in ship financing for decades - and it still remains so. Chinese financiers are doing nothing more than what is the norm. Balloon payments are hardly a "subsidy". Finally, Chinese banks are not lending out money for newbuildings only. They are equally as keen in financing second hand tonnage, under Sale-and-Leaseback structures (which include balloon payments). It is the shipowners who have the choice to spend their hard-earned money in a newbuilding or a used ship.

To conclude: am I in favor of Chinese banks lending ample money to the shipping industry? Of course I am not. But just because they are offering it, doesn't mean we have to take it. Ultimately, the decision to borrow money and, moreover, where to funnel that money (in a newbuilding or a second-hand vessel) lies with the Owners, who have always been the masters of their own fate. We just don't always seem to realize it...

# Risks and challenges for the global marine insurance market





**leronymos Bikakis**, Associate, Hill Dickinson International

## THE COMPETITIVE MARKET OF HULL INSURANCE, AND ITS CHALLENGES

Mr. Bikakis, an Associate at Hill Dickinson International, highlights the challenges Lloyd's of London is facing and focuses on how the market could respond concluding that eventually «it will sail through its choppy waters as the whole maritime industry always does».



The Lloyd's of London marketplace controls about a fifth of the global marine insurance market making it a cornerstone for the wider maritime sector. In light of the \$2.6 billion loss last year involving a number of Lloyd's 80-plus insuring groups that have been unprofitable for the past three years, *Naftika Chronika* tried to establish whether Lloyd's can survive as the home of global insurance. In the following pages, leronymos Bikakis, Associate, Hill Dickinson International, and Dr. Nicholas Berketis, Manager of J. Kouroutis & Co. Ltd. Insurance and Reinsurance Brokers, present their views on the recent developments and prospects of the international marine insurance market.

Edited by Giannis Theodoropoulos and Panagiotis Kapetanakis

Marine insurance has traditionally offered the peace of mind to those operating in the maritime industry that their valuable asset is insured against a wide variety of perils to which it can be exposed when carrying out a maritime adventure. However, as has been widely covered in the press in recent years, hull insurers, including those operating from marine insurances' birthplace, Lloyd's of London, are facing challenges. Marine insurance premiums have been dropping steadily for a significant number of years, with Lloyd's of London only experiencing a small growth of 2% last year. There have already been reports of a number of Lloyd's syndicates limiting their hull exposure, with some even pulling out of the hull insurance market altogether.

88 • NAYTIKA XPONIKA

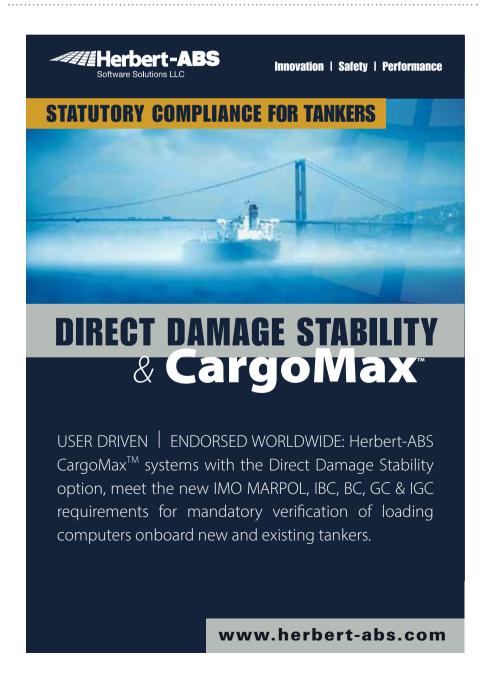
Many reasons have been offered for the underperformance of marine underwriting globally, including the hull business line. The drop in vessel values has elicited smaller premiums and the downward movement of the oil price invariably affected the oil trade and the off-shore industry. What is more, despite the fact that there is a consensus that significant numbers of casualties are becoming a thing of the past, casualties of recent years have shown that the increase in vessel sizes (and consequently values) can come with a heavy price tag when misfortune strikes. The fire at the Lürssen shipyard, which is reportedly expected to give rise to a USD 700 million hull claim, is a recent example of this. The above are all valid reasons of course, which can - to an extent - account for the market's general difficulty, but most players would appear to treat the considerable investment in the industry (the so-called "over-capacity") as the single most significant cause of the difficulties some insurers are facing.

Competition in the field of marine insurance has become fierce, with providers having been established outside of Europe, the world over, and most notably in the Asia-Pacific region. This expansion has also been marked by an interesting tendency of late, especially in these markets, for procuring marine insurance locally, rather than placing necessarily with Lloyd's. This fragmentation has proven challenging for the Lloyd's hull insurance market, not only on account of the relative costs of its operations, when compared to the costs of some of its competitors, but also because of the need to which it has given rise for extending its reach beyond the City and establishing its footprint closer to its clientele. A significant example in that respect would be Lloyd's recent opening in Dubai.

There is a great deal of speculation at the moment about what the global marine insurance market's response will be to the challenges mentioned above, and, perhaps more pertinently, how the Lloyd's market will surmount the challenges its marine hull business is currently going through. Many industry voices have been advocating an increase in premiums as the way forward, but if this were to happen, there is the thorny issue of the timing of such a move. Shipping has gone through

a long recession, and shipowners, in particular, have been hit in recent years with augmented costs associated with greater regulatory compliance - the latest example of the costs and changes in the need for lower emission fuel being only one. An increase in marine insurance premiums at this point is unlikely to be met with any excitement and will in all probability coincide with an increase in P&I premiums which, following many years of continuous increase, have generally been flat for two to four years. Given that P&I and hull insurance premiums account in some instances for as much as 10% of a vessel's operating costs, marine insurance providers

are naturally anxious that increasing premiums is not what the shipping market, and in particular the ship owning community, is particularly ready to accept. Unfortunately, shipping at the moment remains in choppy waters, as does the hull insurance market. However, shipping is well known for its ability to sail through its choppy waters, with the dry market's recently improved state being an example, and the author is confident that the hull insurance market will also do so. The same goes, without doubt, for Lloyd's of London, as it cannot be - and is not - down to mere happenstance that it has been around for more than 330 years.





By Dr. **Nicholas Berketis**, Manager of J. Kouroutis & Co. Ltd. Insurance and Reinsurance Brokers

THE EQUILIBRIUM IN THE
MARINE INSURANCE MARKET
AND THE OVERALL MARKET
CAPACITY THEREOF

Dr. Berketis describes the coinsurance slip system that operates in the London Market while focusing on the reasons that led to the reduction in the overall Market capacity.

The London Insurance Market specializes in underwriting more unusual risks where the probability of loss is not known with certainty by any of the parties to the insurance contract. The Market utilizes the coinsurance slip system essentially to canvas the opinion of Underwriters on what should be the appropriate loss probability. The appropriate probability is one that allows the Lead Underwriter to complete the slip: a probability the rest of the Market considers to be too low will be signaled by failure to complete the slip at the premium rate established by the Lead. Competition in the Market arises from two sources: the following market and other possible leads.

If coverage were to be shared between Underwriters utilizing facultative reinsurance, the direct insurer carries the risk that the supply of reinsurance will be inadequate to meet demand at the established premium rate. In the event of an insufficient supply of coinsurance followers (indicating a belief that the rate is too low), it is unlikely that the coinsurance in-

surance contract will be enforced by the Insured because it will involve him/her in a sub-optimal amount of risk retention. On the other hand, a direct Insurer relying on facultative reinsurance will be committed to the contract and might incur substantial losses if the rate is too low.

The coinsurance system operated in the London Market contributes fundamentally to the profitability and stability of the Market. The necessity to achieve a consensus on the appropriate rate for the risk reduces the chances that the premium rate will mistakenly be set at too low a level. Consequently, Underwriters can be more confident that the rate that is eventually established should be sufficient to cover expected losses. Although the rate so established is not guaranteed to earn underwriting profits, if losses are made, they are at least shared among the coinsurers. In contrast, the risk of an inadequate supply of reinsurance makes any direct insurance that relies on reinsurance support highly unstable. Such coverage may well be unavailable, or at least very expensive, when there is a substantial chance that reinsurance support might be inadequate at the original premium rate.

The supply of insurance coverage for a specific risk depends on the risk attitude of Insurers to a potential loss of a certain size. If that size is small in relation to an Insurer's capacity to absorb losses then, in the absence of non-claims expenses, that Insurer will behave in a risk-neutral manner by providing as much cover as possible so long as market premium exceeds the probability of loss. In his 1962 paper, Borch demonstrated that in a reinsurance market there exists no price that can lead to a Pareto-optimal situation and balance supply and demand. However, he subsequently showed that an equilibrium can be obtained that depends on the attitude toward risk in the market as a whole, and on the stochastic properties of the risk and its relationship with those claims' payments made by the market (Borch [1984]). In practice, capacity constraints may prevent Insurers, either individually or collectively, from supplying full coverage. There are two main types of capacity constraint: on premium income, and on the maximum acceptable loss. All U.K. Insurers are subject to the minimum solvency margins established by the Insurance CompaUltimately, the underperformance of certain Syndicates that lead to their recent decisions to withdraw from Marine Risks caused a reduction in the overall Market capacity.

nies Act 1982. Similarly, Lloyd's Syndicates are constrained by premium limits which depend on the assets of the Syndicates' Names. The effect of a premium income constraint could possibly produce a backward-bending supply curve once premium income reaches the premium limit, as insurers attempt to prevent the premium volume from rising further. Any constraint on the maximum acceptable loss sustainable by the insurance market would involve a supply curve becoming vertical before the full insurance level was reached.

So, ultimately, the under-performance of certain Syndicates that lead to their recent decisions to withdraw from Marine Risks caused a reduction in the overall Market capacity. It is therefore expected that premium rates will increase to improve Market profitability and, in the short to medium term, allow new players to enter the Market. As far as shipping companies are concerned, they will be faced with higher premium levels, in view of the lack of sufficient competition in the Market.

#### References

Aumann, R., (1976), "Agreeing to disagree.", Annals of Statistics 4: 1236-1239.

Blazenko, G., (1986), "The economics of reinsurance.", Journal of Risk and Insurance 53(2): 258-275.

Borch, Karl, H., (1962), "Equilibrium in a reinsurance market." Econometrica 30(3): 424-444.

Borch, Karl, H., (1974) "The Mathematical Theory of Insurance.", Cambridge, MA: Lexington Books, D.C. Heath.

Borch, Karl, H., (1979), "Mathematical models for marine insurance.", Scandinavian Actuarial Journal, pp. 25-36.

Borch, Karl, H. (1984), "Equilibrium premiums in an insurance market.", Journal of Risk and Insurance, 51(3): 468-476.

Carter, Robert, L. and Diacon, Stephen, R. (1991), "The Microstructure of the London Insurance Market" in Louberge, Henri, "Essays in the Memory of Karl Borch", Risk, Information and Insurance, Kluwer Academic Publishers.

90 • NAYTIKA XPONIKA

# How would you reduce risks in shipping?

We want to put safety in the hands of everyone.

Calling all thinkers, creators and inventors. Up for a challenge? We're looking for the next innovative ideas to improve safety in shipping – from people to port. Simply enter our 'Investing In A Safer Tomorrow' competition and share your brainwaves. There's a \$50,000 prize pot for the talented winners.

See you at: 150competition.ukpandi.com
You've got until 30th November 2018 to enter. Good luck.



# ACCA, the world's most forward-thinking professional accountancy body





The Association of Chartered Certified Accountants is a leading international accountancy body with a presence in almost 200 countries worldwide. For the members of ACCA, accountancy is vital for economies to grow and prosper, which is why they work all over the world to build the profession and make society fairer and more transparent. Mr. Emmanuel G. Kapizionis talks to Naftika Chronika about the importance of this global professional accountancy body, the added value of an ACCA qualification for the younger generation, as well as the strategy of ACCA to create partnerships around the world.

Emmanuel G. Kapizionis, Chair of ACCA Member Advisory Committee for Greece, talks to Giannis Theodoropoulos

#### What is ACCA?

In 1904, eight accountants founded the London Association of Accountants, the forerunner of ACCA. ACCA is the Association of Chartered Certified Accountants, a global body for professional accountants with a presence in almost 200 countries around the world, and with 208 thousand members and half a million students. Our body is the first accountancy body which admitted women to membership in 1909 and this gave women a voice and make them accountable.

What is the importance of a professional body such as ACCA in the development and networking of its members around the world?

We are a body with more than 80 global partnerships with accountancy bodies, universities, and international communities. Through this global network, members with the ACCA qualification can work all over the world. Our network is widely

92

recognized and our input and opinion are sought by many governmental agencies, professional bodies, academic institutions, employers and the media worldwide. Consequently, we have members who work in various sectors who are there to help all the other members who want to network and build their professional relationships.

# What is the added value of an ACCA qualification for a young executive who is currently pursuing or wishes to pursue a career in shipping?

In a world of constant changes and globalization, the main principle that should apply to all the younger generations is the ability to obtain a professional qualification that is recognized all over the world and will add value to their cv, and pursue an international career. It is critical for young people to be fully aware of national, international and global changes and the impact those changes have in their lives. ACCA differs from all our competitors because it cultivates professional accountants of multiple skills so as to be adaptable and ready to deal with new technological challenges such as artificial intelligence which seem to be the future in our profession.

In regard to shipping, ACCA's brand-new curriculum provides the knowledge and expertise that prepares professional accountants who are ready to take over senior roles

in financial and executive positions and are really needed by the Greek shipping industry. At the same time, I believe that shipping companies are looking for high caliber executives with a strong professional background who can add value to their companies coupled with the integrity of character and a range of practical skills that only ACCA can provide at the highest level.

#### Joint actions and partnerships have been developed between ACCA and S.O.E.L. What are the benefits of this cooperation?

It is in our future strategic map to create partnerships around the world and recently ACCA and the CFA Institute have agreed to a three-year MOU establishing a program of focused activities in which both bodies will collaborate in a number of key developments. In the same vein, ACCA has a long-established professional relationship with the National Accounting body, SOEL, in which both bodies help their members to act with integrity, professionalism, and the expertise they have developed through our rigorous qualifications and ongoing commitment to CPDs. Furthermore, both bodies have common activities offering a number of events to the market, providing benefits to our members, and escalating our efforts to stay close to all the members.

# What is the importance of ethics for professional accountants around the world? How does ACCA contribute to the development of its members' professional ethics?

Professional accountants have an obligation to act in the public interest and strong ethical principles and behavior will become a very important element in the evolving digital age. In a recent report carried out by ACCA on ethics and trust in the digital age, 95% of professional accountants around the globe opine that an accountant's ethical behavior helps all organizations to build trust and confidence through the quality of the information they provide to internal and external stakeholders.

In other words, and to look ahead of our times, it seems likely that the risks of ethical compromises should go beyond issues of honest and transparent professional relationships. Future professional accountants will need to acquire a rounded skill set that demonstrates the fundamental quotients for success, which are working experience, intelligence, creativity, digital skills, emotional intelligence, and vision - and at the heart of these quotients lies ethical behavior at all professional stages and relationships.



94

## A new era for Greek Marine Technology

WHAT OPPORTUNITIES AND THREATS LIE AHEAD
FOR GREEK DEVELOPERS AND PRODUCERS OF MARINE TECHNOLOGY?





Marine technology is moving fast. What we see is an increased activity, extroversion, and participation in EU forums by developers and manufacturers of marine equipment in Greece. The question is: what is actually changing in the Greek marine technology industry and how will it affect the international shipping industry? To answer this question, the editorial team of Naftika Chronika presents, in the first section of this feature, in alphabetical order, the views and aspirations of the presidents of WIMA, ECOMASYN and HEMEXPO, the three associations of Greek marine equipment manufacturers and suppliers promoting Greek shipping technology, research and innovation.

The views of the Vice President of the Hellenic Institute of Marine Technology (HIMT) regarding the current situation as well as the way forward for Greek marine technology are presented in the second section of the feature.

AYTIKA XPONIKA

THE GREEK MANUFACTURERS

# Greek manufacturers of marine equipment have not been actively included in the shipyards' list of makers for years



Elias Hajiefremidis President, WIMA General Manager, Hajiefremidis S.A.



Mr. Elias Hajiefremidis presents his views on the need for further port infrastructure development in Greece, the role of Greek maritime associations in promoting and establishing Greek marine equipment manufacturers abroad, and the quality of marine equipment that is developed in Greece.

## What are the threats and opportunities that arise from foreign investments in the strategic seaports of our country?

Our country's ports are the main gateways for the transportation of products, commodities, and people and therefore constitute an invaluable asset which, combined with our geographical location, should constitute an absolute priority for the creation of appropriate port infrastructures in order to ensure their beneficial exploitation. Regardless of nationality, attracting and establishing investors with proven financial strength and knowledge of the subject appears to be a one-way street. It goes without saying that the terms and agreements of such cooperation should be genuinely beneficial to the country and not one-sidedly in favor of the investor.

Proper management and cooperation between the state and the investor could bring about many opportunities for development and for the improvement of existing infrastructures, but also for increasing the commercial traffic of our ports and the prosperity of the local communities around them.

# Is there an actual channel of communication between EU institutions and the Greek manufacturing industry? Does this industry receive any support from EU institutions?

Orders for new buildings by shipping companies of Greek interests in shipyards across the globe account for approximately 20% of the relative global activity. Despite this fact, for years Greek manufacturers of marine equipment have not been actively included in the list of makers of these shipyards. Fortunately, this has changed to some extent in recent years, through initiatives taken by two private Hellenic business associations, WIMA and HEMEXPO, in order to promote and establish Greek manufacturers in the list of credible makers of marine equipment.

To enhance these efforts, EU support needs to be more effective through programs which finance the maritime sector, such as the European Investment Structural Funds, Horizon 2020, and the cooperation with agencies such as the Integrated Maritime Policy European Maritime Safety Agency, which has not yet been sufficiently exploited.

Direct communication with shipping companies and the feedback from their technical departments is a crucial advantage for the Greek manufacturers.

# What is the current status of cooperation among manufacturing companies, government agencies, and maritime associations?

Associations of companies related to the maritime sector, like WIMA, should have an active advisory role on matters relating to maritime policy, support of exports etc., submitting their proposals to the Hellenic Ministry of Shipping in order to improve and increase the competitiveness of Greek enterprises.

In addition, close cooperation is proposed between companies and the Merchant Marine Academies, maritime associations, the Greek Shipowners' Association, the Chamber of Shipping, the Chamber of Commerce and Industry of Piraeus. Finally, it is also necessary to strengthen the existing cooperation with Enterprise Greece and to submit proposals for strengthening the role of the Hellenic Registry.

## What do you consider as the main competitive advantage of the Greek marine equipment manufacturers?

Greek manufacturers of marine equipment operate at the heart of global shipping and their products have been tried and tested worldwide for many years. Additionally, Greek manufacturers have advanced production facilities with modern machinery equipment. The high level of their R&D has been proven by new innovative products, research funding, patents, and awards. Direct communication with shipping companies and the feedback from their technical departments is a crucial advantage for the Greek manufacturers, as they improve and adjust their product range according to customer needs, even offering "tailor made" solutions in demanding cases.

## The cooperation between Government and maritime companies leaves a lot of room for improvement



Stavros Kassidiaris
President, Ecomasyn
President, C&A Stravros Kassidiaris S.A.



Mr. Stavros Kassidiaris talks to Naftika Chronika about the need for cooperation among Greek Clusters on an operational level, the need for procedures to be simplified by the Greek government, as well as the main advantages of marine equipment manufacturers in Greece.

#### What are the threats and opportunities that arise from foreign investments in the strategic seaports of our country?

We do not consider any new investment in our country, especially in the ports, to be a threat. Besides, those who work in this sector are familiar with the high competition that exists in free economies, and more so in shipping. On the contrary, we believe that investment in equipment and installations in ports will bring more ships and thus there will be more employment and creation of new jobs.

# Is there an actual channel of communication between EU institutions and the Greek manufacturing industry? Does this industry receive any support from EU institutions?

Lately, there are several opportunities in Europe regarding the Maritime Clusters and their cooperation. There is a strong knowledge transfer and exchange through Conferences (i.e. organized by DG MARE, EUSAIR, etc.) and other European Union Projects, with strong Greek participation. There is already a significant number of Greek Clusters with similar orientation and a strong European presence. Next step should be a more solid cooperation at the operational level.

A high level of know-how has been accumulated over the last 60 years in the companies of Piraeus.

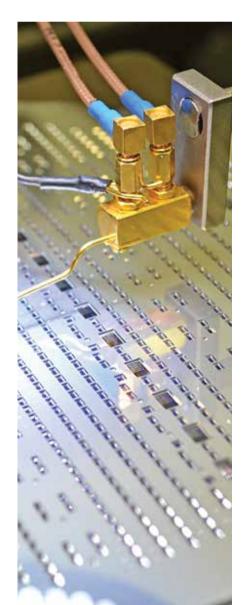
# What is the current status of cooperation among manufacturing companies, government agencies, and maritime associations?

The cooperation between Government and maritime companies leaves a lot of room for improvement. It is true though that there are many different trends inside the maritime companies targeting different, sometimes opposite directions. This leads to a continuous lack of important decision-making at all levels, especially at the high ones. A simplification of the pro-

cedures, a more open and attractive business environment, and specific incentives will help in the right direction. As for the various organizations, their relations are generally good, but they also need to cooperate further.

# What do you consider as the main competitive advantage of the Greek marine equipment manufacturers?

The main competitive advantage of Greek companies is the large Greek-owned fleet. Of course, good coordination is required between shipowners and Greek manufacturers, so that this advantage is of practical value. We also note the high level of know-how that has been accumulated over the last 60 years in the companies of Piraeus. We believe it is time to take the next step and bring our country higher on the world shipbuilding and ship repair list.





# Bureau Veritas global services for the marine industry

Classification - Certification - Training & Advisory services

For further details please contact us: **Bureau Veritas Hellas A.E.** 

23, Etolikou Str. - 185 45 PIRAEUS Tel: +30 (210) 40 63 000

Email: grc\_lpr@gr.bureauveritas.com

Visit us on: www.bureauveritas.com www.bureauveritas.gr





The shipbuilding sector in Greece is turning over a new leaf, which will give further impetus to the Hellenic Marine Equipment Manufacturers & Exporters



Helen Polychronopoulou
President, HEMEXPO



Mrs. Helen Polychronopoulou presents her thoughts on the private investments that are expected in Greek ports, the reasons why the EU should protect the niche market of cruise vessels construction, and the necessity for maritime companies to invest in R&D.

What are the threats and opportunities that arise from foreign investments in the strategic seaports of our country?

Greek governments, the current one included, decided to go ahead with the privatization of the country's port industry. Initially, they proceeded with the privatization of the two major ports, Piraeus Port Authority and Port Authority of Thessaloniki while the rest will be taken over gradually. On the other side, Greek enterprises are expecting private investments in these ports which, together with the growth in other sectors, will allow the country to return to growth rates based on its own production capacity. One of these sectors is the shipbuilding sector, which is turning over a new leaf and will thus give further impetus to the Hellenic Marine Equipment Manufacturers & Exporters. Especially now that we have successfully faced the competition abroad by producing the best value for money products, the revival of Greece's shipbuilding industry will provide our industry with one more strong advantage over the global competition.

Is there an actual channel of communication between EU institutions and the Greek manufacturing industry? Does this industry receive any support from EU institutions?

By imposing restrictive regulations for decades, the European Union has given the opportunity to Asian yards, which are still supported by their governments, to develop their shipbuilding and manufacturing industry. At the same time, Europe relies mainly on the cruise industry by holding the know-how. This industry has also awakened the interest of the Asian countries, which are trying to become involved in the construction of cruise ships and specialized ships. We strongly believe that in Europe we have to protect the construction of cruise ships and be one step ahead of the competition by investing in R&D and Smart Ship Solutions.

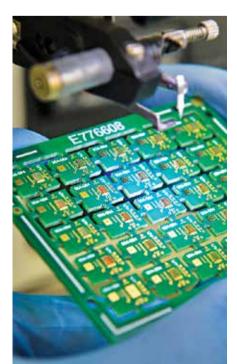
What is the current status of cooperation among manufacturing companies, government agencies, and maritime associations?

Government and public agencies have recognized the importance of the marine equipment manufacturing industry to the shipping sector as well as its vast potential. As a result, Enterprise Greece supports the extroversion of Hellenic Marine Equipment Manufacturers & Exporters at the biggest maritime exhibitions worldwide.

In Europe, we have to protect the construction of cruise ships and be one step ahead of the competition by investing in R&D and Smart Ship Solutions.

What do you consider as the main competitive advantage of the Greek marine equipment manufacturers?

Since Hellenic Marine Equipment Manufacturers & Exporters took the decision to seize the opportunity and seek a better tomorrow in the worldwide market, it was necessary to go ahead with a plan. Today, we are very proud of the international recognition for our R&D and of the fact that many of the HEMEXPO companies have been awarded for their innovative products. Although we still have a long way to go, we can safely say that Greek marine equipment is the best in the world in terms of value for money.



# Seamen



43, Iroon Polytechniou Ave.,185 35 Piraeus, Greece Tel: +30 210 422 8085 / Fax: +30 210 422 8076 E-mail: tankerops@seaven.gr / dryops@seaven.gr

## Greek marine technology developers can make a significant contribution to the world Maritime sector



Konstantinos Kalogeropoulos
Vice President, Hellenic Institute
of Marine Technology



Konstantinos Kalogeropoulos talks to Naftika Chronika about the contribution of Greek marine technology developers to the global maritime sector, the importance of synergies and cooperation within the industry as well as the future impact of digitalization on the transformation of the shipping industry.

#### What do you believe Greece has to offer to the world Marine Technology industry?

Greek marine technology developers,

through their long experience in new con-

structions and the accumulated knowledge

obtained through their participation in re-

gional and international commercial and research projects, can make a significant contribution to the world Maritime scene. The new generation of marine technology companies invests in research and innovation by designing systems that are efficient, qualitative and competitive internationally. For example, I will mention a few leading Greek companies such as Danaos, Metis, Laros, which specialize in smart ship systems and big data, as well HEMEXPO under whose umbrella many marine technology manufacturers promote their products and patents globally. The aforementioned as well other smaller companies participate each year in the HMIT Annual Meeting, present their research results together with other academics, and

What are your thoughts on the synergies between institutions like HIMT and private companies? Has HIMT developed common actions with companies in Greece?

lead the trends in Greece.

After so many years of existence, HIMT has developed strong links with the private sector. Among the main goals of our institution is to cooperate with both the academia and private marine technology companies in order to promote and disseminate specialized information to the maritime community as a whole. This is achieved through both our Annual Meeting and the monthly presentations on special technological issues where important companies present the findings of their research, their technological solutions etc. In this context, the "Hephaestus" initiative was launched in collaboration with the Marine Technical Managers Association and other organizations to promote Greek shipbuilding equipment manufacturers and ways to improve their position in construction projects. Our long-term goal is to create synergies and take more initiatives to promote Greek marine technology both in Greece and abroad.

The gradual transformation of shipping has already begun as it is becoming more intelligent, greener and soon, as it all looks, more autonomous.

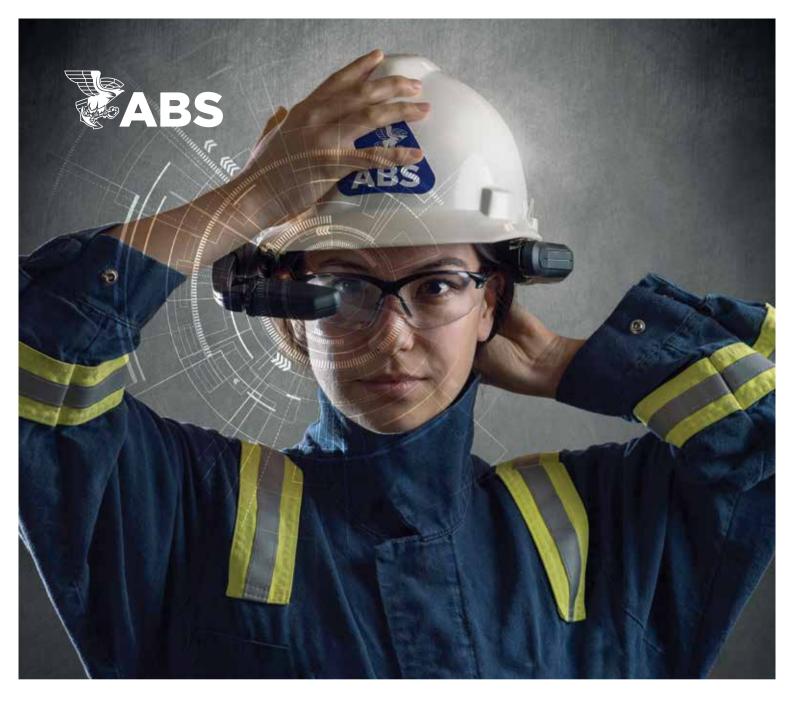
## How do you imagine the future of Maritime Technology?

The future is closer than ever. The gradual transformation of shipping has already begun as it is becoming more intelligent, greener and soon, as it all looks, more autonomous. Research is progressing rapidly while new systems and materials which can improve the performance and efficiency of the maritime sector are being created all the time. Interestingly, political decisions concerning the maritime community are creating new research circles and the final question is which technologies will be more effective and accessible in order to prevail internationally. Of course, the future will be determined by market needs as formulated in international organizations. Our Institute participates in such dialogues by putting forward proposals as well as concerns such as the upcoming IMO debate on autonomous vessels.

## What are your thoughts on the quality and quantity of the qualified workforce currently available in Greece?

I am convinced that there is an adequate qualified workforce in Greece with very high education, knowledge, and specialization. This is the result of two basic conditions, the first being the high level of technical educational institutions and the second and most important the transfer of know-how from senior to younger staff entering the industry, creating an indelible chain of knowledge which classifies it as the world's leading shipping industry. Furthermore, with the educational activities and seminars it organizes throughout the year, our Institution aims at informing both the young students and the technical staff of the companies, thus contributing to the further improvement of the workforce's quality.

100 © NAYTIKA XPONIKA



## **UNLOCK DATA INSIGHT**

With regulatory demands, advances in digital technologies and escalating cyber risks, companies must make difficult decisions daily – to remain safe and competitive.

Merging our extensive knowledge of marine and offshore assets with new capabilities in data science and advanced analytics – ABS is enhancing the class experience by working with industry to unlock insights from data to more accurately predict performance and identify safety trends.

Let ABS help you improve the safety and performance of your assets. Contact us today at cybersafety@eagle.org.

# Sea Pioneer Shipping Corporation: MV Audacity





The modern Newbuilding Kamsarmax vessel named "Audacity" was delivered to her Managers, Sea Pioneer Shipping Corporation, in September 2018. The vessel, which is registered under the Liberian flag, was constructed under the supervision of Lloyd's Register at Tsuneishi Shipbuilding Co. Ltd. in Fukuyama Japan.

102 ♦ NAYTIKA XPONIKA





## **MV AUDACITY**

#### SHIPYARD

Tsuneishi Shipbuilding Co. Ltd.

#### **VESSEL TYPE**

Kamsarmax Bulk Carrier

#### DATE OF DELIVERY

September 2018

#### FLAG

Liberia

#### CLASS

Lloyd's Shipping Register

#### LOA

228.99 M

#### BREADTH

32.26 M

#### DEPTH

20 M

#### **GROSS TONNAGE**

43,084

#### NET TONNAGE

27,383

#### DWT

81,717 MT



# Trends and challenges for the European shipyards

THE EUROPEAN SHIPBUILDING INDUSTRY IN SEARCH OF ITS COMPETITIVE ADVANTAGE



Europe's shipyards are required to operate within a highly globalized and competitive environment. In recent years, however, they have been facing rough seas especially due to the low-cost competition from Asia which is directly linked to government subsidies to Chinese and Korean yards. In this demanding environment, European shipyards are looking for ways to secure stability and growth. Developing green shipyards, changing investment strategies, and focusing on specific and niche markets may be the answer that will lead the continent's most historic industrial sector to a fruitful future.

A report by Panagiotis Kapetanakis

## Damen's strategy has always been to become a market leader



#### Carlos de Vliegere

Sales manager at Damen Shiprepair & Conversion, talks to Naftika Chronika about Damen's strategy to become a global player within the ship repair business and about the challenges shipyards come up against these days regarding financing.

Bearing in mind the volatile atmosphere in the wet market, are you considering any changes to your strategic plan and investment strategies?

Damen's strategy has always been to become a market leader with a global presence within the ship repair business. Damen's network of 16 ship repair yards is showing consistent growth. This includes recent acquisitions in Amsterdam, Dunkerque, and Brest. In 2017 on the island of Curaçao, and Verolme in Rotterdam. Our most recent takeover in Mangalia this year is an important location for our Greek customers, which offers an attractive repair facility in the Black Sea area. A vital aspect of this expansion is to maintain uniform levels of quality throughout the DSC network.

104

## 2018 ANNUAL MEETING OF MARINE TECHNOLOGY

TECHNOLOGICAL CONFERENCE AND EXHIBITION



## H.I.M.T. | HELLENIC INSTITUTE OF MARINE TECHNOLOGY

## 4-5 DECEMBER 2018

**EUGENIDES FOUNDATION AUDITORIUM** 

#### MARINE TECHNOLOGY IN 2020: Smarter and Greener

- Design and operation of ships and offshore units.
- New and forthcoming standards and regulations
- New methods materials and technologies for maritime safety and environmental protection
- Novel technologies in the construction, conversion and survey of ships
- Ship propulsion and auxiliary machinery
- Technologies for the reduction of shipborne emissions
- · Novel marine fuels and lubricants
- · Fleet maintenance and repair
- Innovative management methods for ship, fleet, cargo and port facilities
- Innovative and smart methods and technologies for the monitoring. maintenance and performance assessment of ship
- Technological problems and solutions of the Greek coastal shipping
- Special purpose vessels (bunkers, rescue, tugs, research)
- Hybrid energy ship systems
- Ships with smart applications in the marine industry challenges and oppurtunities

#### SUPPORTING ORGANIZATIONS





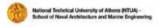




















#### PLATINUM SPONSOR



#### GOLD SPONSORS









5 DECEMBER 2018

DESIGN, CONSTRUCTION AND

OPERATION OF LNG/LPG VESSELS

PARALLEL TECHNICAL CONFERENCE

IN COOPERATION WITH

ROYAL INSTITUTION OF

NAVAL ARCHITECTS



#### SILVER SPONSORS





































EXEXXXX





SUPPORTER





ON LINE MEDIA SPONSOR

































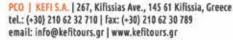












Do you believe that the focus on specific markets, such as the cruise industry, and the development of a green shipyard concept could offer the European shipyards a competitive advantage over the Chinese?

The cruise industry is a fast-growing market looking for reliable partners offering high quality work and short delivery times on locations close to their turnaround ports. Damen's network of repair yards is able to meet these requirements and we see an increasing number of bookings from the Cruise industry. Damen believes that protecting and conserving our environment should be a joint effort between client and contractor. Sustainability and working using the latest methods and techniques are an integral part of this and Damen strives to certify all our facilities according to ISO I400I standards. We see many of our clients sharing the same view and this is their main reason for choosing one of our facilities.

A vital aspect of this expansion is to maintain uniform levels of quality throughout the DSC network.

What are the biggest challenges shipyards come up against these days regarding financing (e.g. balloon payments)?

What Damen experiences in the current challenging market is that ship owners are seeking extended payment conditions when negotiating ship repair contracts. Off course there are limitations to the extent to which we are able to finance ship repair jobs. However, being part of the Damen Group, which has a strong Customer Finance department with long lasting relationships with national and international commercial banks, export credit insurers, investors and (multilateral) institutions, we have always been able to reach acceptable payment conditions for our clients.

## Gibdock aims to become a regional centre for environmental refits



#### **Richard Beards**

Managing Director at Gibdock, talks to Panagiotis Kapetanakis about a shipyard's need to diversify its business base and not be dependent on any one sector of the shipping industry, while, on the other hand, he stresses the importance of heading towards a green-shipyard future.

Bearing in mind the volatile atmosphere of the wet market, are you considering any changes to your strategic plan and investment strategies?

The tanker market accounts for a relatively small element within Gibdock's overall workload and so perhaps we are fortunately less affected than some others may be by market volatility in this sector. We have a highly diversified business base that does not depend heavily on any one sector, so a downturn in one market is generally balanced by an upturn in others. Gibdock handles repair and maintenance work for a wide range of vessel types, with the majority of work to date in 2018 comprising containerships, bulk carriers, offshore craft, ferries, and ro-ro ships. Over the first 9 months of this year we recorded a very strong performance, with increased levels of ship repair activity evident in all these different market sectors. This level of success and the high level of future bookings from our clients convince us that our overall strategy is on the right track, so we have no plans to change direction.

Do you believe that the focus on specific markets and the development of a green shipyard concept could offer you an advantage over global competitors?

Gibdock has a reputation for being one of the leading yards meeting the specialist needs of the offshore sector, and this is a market we have focused heavily on in recent years. One of the most encouraging trends so far in 2018 has been an upturn in dockings for the offshore market, with a number of major blue-chip operators returning to the yard this year for packages of repair and upgrade works.

In terms of being a green shipyard, we take our responsibilities to the local environment seriously and have put in place a number of measures to mitigate any adverse effects, from blasting, for example. However, at present, our primary focus as a green shipyard is to ensure we can help shipowners and operators reduce their environmental impact in line with international legislation. Owners in all sectors of the market are having to consider retrofitting their ships with ballast water treatment systems and exhaust gas scrubbers. We have the expertise, the skilled workforce, and the ideal geographic location for such work and have already carried out a number of such projects and have more at the enquiry stage. Gibdock aims to become a regional centre for environmental refits and this will be a core element of our business strategy going forward. In recent times Gibdock has successfully made the transition from ISO I400I:2008 to the new ISO I400I:20I5 environmental standard and did so well in advance of the mandatory date set by ISO for companies to make the transition. One of the things the new standard focuses on is ensuring that procedures and documentation span the entire lifecycle of a product. That makes the yard responsible for ensuring traceability from the moment a product is sourced to the time of its disposal. Shipyards have a vital role in ensuring the timely and effective delivery of the shipping industry's green agenda. Gibdock stands ready to play its part.

106 

● NAYTIKA XPONIKA

## We aim to enhance quality because quality drives us forward



#### Angelos Phokas

Technical Director at Multimarine Shipyards Ltd - Multimarine Services Ltd, talks to Panagiotis Kapetanakis about the future plans of Multimarine and its strong belief in environmental protection and the green shipyard concept. Bearing in mind the volatile atmosphere in the wet market, are you considering any changes to your strategic plan and investment strategies?

On the contrary, we continue to invest in infrastructure and equipment. In particular, we are investing in creating a very large workshop that will include an ABB Service Station and a VIKING Service station. Moreover, we are creating facilities to include a travel lift that will enable us to dock yachts. All these moves aim at enhancing quality because quality drives us forward.

Do you believe that the focus on specific markets, such as the cruise industry, and the development of a green shipyard concept could offer you an advantage over global competitors?

Absolutely yes. We believe that green is the way forward. Our brand-new ABS Classed Floating Dock incorporates the latest environmental protection features and, moreover, prior to any new creation,

we develop an Environmental Study that we actually implement. We are not related to the Cruise Industry.

We continue to invest in infrastructure and equipment. In particular, we are investing in creating a very large workshop that will include an ABB Service Station and a VIKING Service station.

What are the biggest challenges shipyards come up against these days regarding financing (e.g. balloon payments)?

Balloon payments do not influence us. We have the ability to absorb such settlements.



### Resolve Marine Group expands in Alaska









Resolve and their subsidiary I-Call Alaska have recently expanded in Alaska resulting in coverage of all of Western Alaska and the Prince William Sound Captain of the Port Zones. The expansion, after working in Alaska for over 35 years, has allowed I-Call Alaska to be the leading Alternative Planning Criteria provider in Alaska under the US OPA 90 Salvage Marine Fire Fighting guidelines, as well as the leader in wreck removal.

Currently, I-Call Alaska and Resolve have opened depots in Homer and Noam, Alaska. That adds to their additional warehouse in Anchorage and drydock facility in Dutch Harbor, Alaska.

I-Call Alaska focuses on an Emergency Response approach, preventing oil from hitting the water and getting to a vessel in distress. Resolve Alaska keeps the only privately funded salvage tug in North America, the "Pioneer", stationed with salvage equipment and oil spill response equipment, ready with an experienced team of salvors, engineers, and naval architects. One of Resolve's strengths in Alaska is to also have the equipment and personnel available for Wreck Removals in extreme conditions. Most recently Resolve Marine Group lifted the "Pacific Knight";

Case Study: On 25th July, the fishing vessel "Pacific Knight" sank in approximately 25' of water Inm NNE of Clark's Point. Using its company aircraft, Resolve mobilized fuel removal equipment, a Salvage Master and 3 Divers / Techs, which flew in to the site on 26th July.

They immediately worked on sealing off fuel tank vents and prepared for fuel removal operations. The M/V Makushin Bay, another one of Resolve's heavy lift assets in Alaska, was underway from Dutch Harbor for vessel's tow and was diverted on 28th of July and proceeded to wreck site. The "Makushin Bay" arrived 29th July and crew were immediately transferred to the vessel and anchored over the wreck site to perform fuel removals. A total of 1,439 gallons of fuel and 716 gallons of oily water were removed.

Resolve "Pioneer" towed the RMG300 Barge, which has a heavy lift A-Frame along with an American II320 crawler crane onboard. Divers air-lifting under both bow and stern to run lifting chains. On August 29th, the vessel was lifted, brought to the surface, and they continued pumping water by removing sand. On August 31st, the vessel was safely floating alongside the "Makushin Bay" and was then towed back to Dutch Harbor.

108

PANAMA SHIP REGISTRY





One Century Promoting Worldwide Trade and Ready for the Future





# General Consulate of Panama in Greece

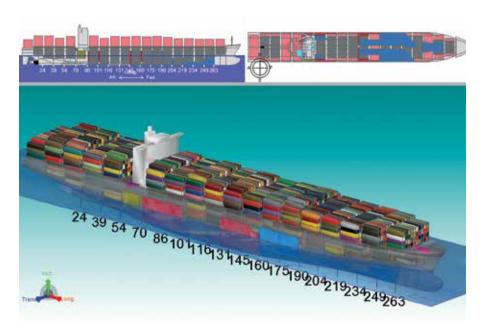
# Marine Analysis Software Solutions: Introducing Herbert-ABS



By Panos Roussos,
MEng Naval Architect,
Project Manager,
Herbert-ABS Software Solutions LLC.
www.herbert-abs.com



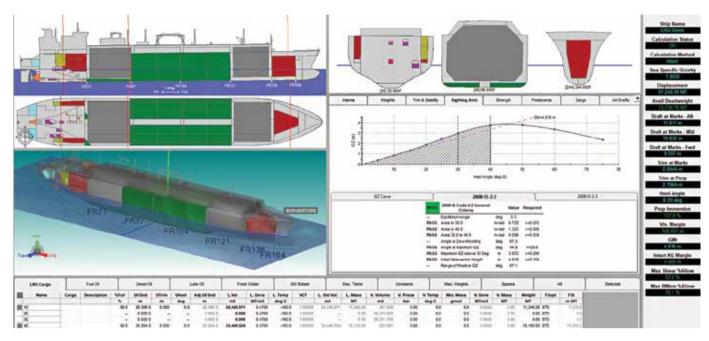
Herbert-ABS Software Solutions LLC (Herbert-ABS) sets the standard for leading edge stability, load management, and emergency response software solutions for the marine and offshore industries. A joint venture between Herbert Engineering Corporation and American Bureau of Shipping, Herbert-ABS supplies quality marine and offshore software products that include LMP-Offshore (offshore load management), CargoMax (shipboard trim, stability, and loading) and HECSALV (salvage engineering and design). Herbert-ABS is headquartered in San Francisco, with site offices in Houston, Glasgow, Busan, Singapore, and Shanghai. Herbert-ABS recognizes that success comes from putting their customers first in terms of on-time deliveries, technical excellence and after sales support. The company offers user-friendly software, which is continuously enhanced to meet the needs of the industry.



Part of the CargoMax user interface for a Containership

### **Herbert-ABS Product Line**

CargoMax<sup>™</sup> is Herbert-ABS's customizable product line of Classification Society approved shipboard loading instruments with installations on over 3500 vessels. CargoMax is based on the same product model as HECSALV and has set the standard for shipboard stability and load management software for over 35 years. This proven system combines rigorously tested algorithms with a user friendly interface to provide quick and consistent results; ensuring the safety of the vessel is maintained at all times. CargoMax™ is used on board tankers, bulkers, Ro-Ro's, containerships, barges and other vessel types to maximize cargo utilization, increase container lashing efficiency, monitor margins of safety during cargo operations, and improve safety by reducing human error. Already boasting a robust suite of features, the newly released Cargo-Max<sup>™</sup> 2.I includes calculation enhance-



Part of the CargoMax user interface for a Tanker vessel

ments for load discharge rate monitoring, advanced load/discharge/ballast water exchange sequencing and advanced bulk pile features. Additionally, a fully rendered 3-D graphical display shows tank and cargo fillings, vessel attitude, and is fully interactive with pan, zoom, rotate and customizable cutting planes.

The CargoMax<sup>™</sup> Trim Optimization Tool for Enhanced fuel savings offers a powerful ease-of-use solution bundled with our regulatory feature distinguishing it from others. It allows you to obtain achievable trim and draft optimization at the press of a button, for enhanced fuel savings and regulatory compliance. Other tools often suggest drafts and trim parameters that are not operationally attainable. LMP (Load Management Program) is designed to meet the demanding needs of offshore installations, including stability, monitoring, and weight management for a wide range of offshore platform designs. This proven system combines rigorously tested algorithms, a user-friendly interface and custom tools, and reports to provide quick and consistent results.

LMP tracks ongoing configuration changes to meet offshore stability and operational monitoring needs. It provides weight management and the capability to evaluate the operational limits of various situations. ABS RRDA emergency response support

During a vessel emergency, your most valuable assets are time and confidence. HECSALV provides timely and accurate results when you need them most.

provided from onshore can provide technical assistance in emergency situations utilizing HECSALV<sup>TM</sup> and the same underlying computer model.

LMP has been on the market for more than 10 years on a number of different drilling and production vessels and boasts a strong suite of features including automatic communications with tank level systems, detailed deck survey tools, lightship modifications tracking, and customizable reports. LMP also includes robust multiple axis stability, calculation of wind, current & wave forces, 6-degree of freedom calculations and advanced tendon, riser, SCR and mooring calculations. The program interface enhancements include unparalleled 3-D graphics, enhanced integrity

monitoring features, alarms summary, fully customizable displays, units & conventions and improved communications with other on-board systems.

**HECSALV™** is Herbert-ABS's industry leading casualty response software trusted by naval architects, salvors, navies, and regulator societies around the world. HECSALV enables rapid evaluation of damaged conditions of a ship, including the analysis of intact conditions, free-floating damage cases, oil outflow prediction, and various types of groundings. During a vessel emergency, your most valuable assets are time and confidence. HECSALV provides timely and accurate results when you need them most. Starting with the last known departure condition, HECSALV allows the user to quickly collect and process the available data, define the extreme bounds of the problem, and evaluate multiple scenarios for remedial action.

HECSALV<sup>™</sup> for Offshore enables rapid evaluation of damaged conditions of an asset, including the analysis of intact conditions, free-floating damage cases, oil outflow prediction, advanced loading capabilities for tendons, chains & risers, MODU Code stability evaluation, environmental loading (wind, current & wave), multiple-axis stability, and various types of groundings.

# Prevention at Sea — developing widely recognised maritime software products



By George Ellinas, Business Development Manager, Prevention at Sea



Nowadays, on the eve of the fourth industrial revolution, maritime software technology has a significant role to play in the safety of vessel operations and in helping organizations work more efficiently. Mr. George Ellinas writes about the new software products and solutions developed by Prevention at Sea to make the life of seafarers easier and the ship operation friendlier and more customizable.

Developing widely recognised maritime software products is not an easy task and the key to success is the will of maritime technology companies to invest heavily in learning how the shipping industry actually operates. We have been working towards this aim for the last 4 years, developing maritime software solutions in accordance with shipping business rules and best practices. Moreover, our software is designed to enhance rather than hinder the end user's daily routines and workflows.

**E-ORB** (electronic Oil Record Book) is a Lloyd's Register certified maritime software application developed to enhance efficiency on-board, and demonstrate compliance with the requirements of international conventions and flag registries with regards to Electronic Oil Record Book (ORB) keeping. Designed to assist Seafarers in the traditional paper ORB record keeping and subsequently replace it by establishing software transparency, credibility, and traceability.

- Ist electronic Oil Record Book
- winner of 4 international awards
- gained worldwide recognition & approval from major registries
- user friendly & customizable
- allows for validations before data entry
- entries are in accordance with IMO regulations
- data transfer ashore & automated notifications

The **RH Manager** (Rest Hours Manager) is a software application designed to assist seafarers in properly recording, calculating and monitoring the working and rest hours on board as set out in STCW (including exceptions as applicable), MLC 2006, OPA 90, 46 US Code 8102.

- user friendly & customizable
- allows for the creation of events in calendar screen
- cross checking between daily task logbooks thus avoiding inconsistencies and non-conformances
- · ability for the user to create and

- monitor Job Orders coming from head office
- creation of predetermined watches during configuration
- allows for recording of works carried out and planning of works for next days
- data transfer ashore & automated notifications
- Certified LR product

N.E.MO. (Noon emissions Monitoring) is a robust maritime standalone application designed to assist ships and ship operators in the proper Voyage Monitoring and Reporting of EU/IMO CO2 emissions and SEEMP requirements, as well as collecting data for annual reporting.

- allows for customization based on ship specific machinery & charter party profile
- comparison towards sea trials or empirical data
- enables timesaving & efficiencies when validating data
- ability to monitor all voyages with voyage history & quick search option
- · provides fleet benchmarking
- enables full reporting on port calls
- offers the ability to transfer data from other software
- availability of customised reports& advanced analytics
- enables easy uploading of CO2 emissions to Thetis MRV platform
- Certified product by a reputable verifier

DATA TRANSFER ASHORE for all our software is enabled via Prevention at Sea's official platform

**'iSEA'** (intelligent Ship electronic Analytics) designed to ensure fleet performance optimization.

#### **COMING SOON!**

a full suite of 'ε-Logbooks' expected to be released by Prevention at Sea in 2019

Don't Cure, PREVENT





Grecian Castle Hotel T: 22710 44740



Golden Sand Hotel T: 22710 32080



Aegean dream hotel t: 22710 33471



Sea view resorts & Spa Hotel T: 22710 33354-7



Kyveli apartments hotel T: 22710 94300



SUNSET HOTEL T: 22710 32420-21





TEL.: +30 - 22710 32080 FAX: +30 22710 31700

www.fegoudakis.com info@fegoudakis.com



# MARKET NEWS



## Ecochlor Completes Harmonization of USCG and IMO Type Approvals

Ecochlor is pleased to announce the complete harmonization of USCG Type Approval to their IMO Type Approval for their line of Ecochlor® Ballast Water Treatment Systems.

During Ecochlor's USCG Type Approval amendment process, minor updates and improvements were made to aspects such as documentation, available filter models, and control system software. Once the USCG Type Approval amendment was complete, Ecochlor worked with DNV GL as the Recognized Organization for the Norwegian Maritime Authority to harmonize all aspects of the USCG approved system with the existing IMO Type Approval. One important update was the inclusion of additional FilterSafe models to the approved equipment list, such as FilterSafe's highest throughput SuperTurbo (ST) filter. This update increases the design and installation options for ship owners.

The Ecochlor® BWTS has been evaluated through various international and domestic regulatory processes that verify treatment efficacy, environmental acceptability, safety to human health, and safety to ships. For more information on Ecochlor's regulatory approvals go to http://ecochlor.com/regulatory-approvals.

Ecochlor holds a unique position in the shipping industry as the only company utilizing patented chlorine dioxide (CIO2) treatment technology for ballast water treatment. The Ecochlor system uses a two-step process to treat ballast water – filtration followed by disinfection with chlorine dioxide. System effectiveness is not impaired by variations in salinity, temperature, turbidity, organics, and vibration. The Ecochlor® BWTS is the only USCG Type Approved technology that does not require treatment or neutralization on discharge.

# Navarino becomes an SES distributor

Navarino, the maritime industry's leading communications and technology company, announced today that it will be offering SES Networks' global managed mobility service, based in Ku-band, to support

its delivery of high-quality connectivity to global shipping companies.

"Navarino has a wide customer base with a broad range of diverse requirements that demand reliable and consistent highspeed connections for their data services. This makes SES Networks - with its extensive satellite network and one of the most well-regarded contention ratios an ideal partner for us," said Konstantinos Katsoulis, Navarino Commercial Director. "In recent years we've seen a step-change in the industry that has been driven by digital transformation, and by collaborating with SES Networks we're uniquely positioned to enable high performing data connectivity at sea. Through our collaboration we know that our customers will have the capacity, coverage, and performance they need to navigate this and any future changes successfully."

"We strive to go beyond connectivity and it is vitally important for us to work with a partner that's equally committed to our ambitions of delivering tailored and cost-effective global solutions that provide a superior service," said Simon Maher, Vice President Global Maritime Services at SES Networks. "Navarino's clients are some of the most creative and strategic in global shipping and through connectivity powered by SES Networks they'll take advantage of leading-edge performance combined with state-of-the-art reliability that will eliminate any connectivity barriers for their operations."

## ClassNK's fifth generation PrimeShip-HULL adds new sharing dimension

Four years after becoming the first class society to develop and release software to do the intensive calculations called for by IACS' Common Structural Rules (CSR), today ClassNK remains ahead of the pack. Adopted by International Association of Classification Societies (IACS) in 2013, the Common Structural Rules (CSRs) were designed to enhance ship safety and reliability by requiring a more comprehensive structural analysis at the design stage. The new rules encompassed the need for FEM analyses covering the entire range of cargo hold structures, as well as new formulae for buckling, fatigue, and residual strength criteria.

II4 ♦ NAYTIKA XPONIKA



# Adams Ship Buildings & Repairs FZE





- Ship Repairing
- Conversions
- Ship Building
- Electrical Repairs

- Piping
- Steel Fabrication
- Mechanical Repairs
- Fuel Pump Injector Repairs

Tel: 0097165269301, Fax : 0097165269305, P.O.BOX 50906, Hamriyah Freezone, Sharjah, UAE Website : www.adamship.com, Email : info@adamship.com

The CSRs represented a self-evident step forward for the safety of bulk carriers and oil tankers, but they also brought practical challenges for shipyards and vessel designers as the calculations needed to perform these analyses and satisfy the requirements are both complicated and time-consuming. They add considerably to overall vessel design time. Indeed, before their introduction, there were fears that the rules would impose such an impossible burden that yards would be unable to cope.

ClassNK created PrimeShip-HULL expressly to alleviate this burden. The solution is now used by around 90 shipbuilding and design companies, located mainly in Japan, South Korea, China and other countries in East Asia - reflecting where most of the world's ships are now built. In fact, with more than 600 licenses in use, most shipyards constructing the ships subject to the CSR now utilize ClassNK's software.

Earlier this year ClassNK released the fifth version of PrimeShip-HULL. As well as absorbing IACS' latest round of amendments to CSR, the update includes several refinements to existing functions and introduces some completely new ones aimed at sustaining its remarkable level of uptake.

In addition to UI tweaks aimed at streamlined workflow, the report generator in PrimeShip HULL's prescriptive calculation software now operates independently. This allows users to continue editing cross-section data or other tasks whilst a report is generated in the background.

The ability transfer data between the CAD - and other design tools used by naval architects - and PrimeShip-HULL quickly and efficiently has been key to the software's success. In the latest round of improvements, the data linkage function for importing body plan data from 2D CAD software has been further enhanced making it possible to create sectional data from the body all at once, eliminating the need for repetitious data conversion.

Overall, the enhancements and new functions will further reduce necessary man hours and shorten design lead times. Some yards have reported an over 50% reduction in the manhours spent on structural evaluation for prescriptive requirements and for direct strength requirements through Finite Element Analysis (FEA), although results depend on ves-

sel type, structure, and coarseness of the original CAD data.

In addition, ClassNK offers a version of PrimeShip-HULL for container ships, even those the vessel type is not subject to IACS CSRs. ClassNK continues to offer PrimeShip HULL to shipyards and designers free of charge.

## Navarino announces connectivity cooperation agreement with Intelsat

Navarino, the maritime industry's leading technology company, announced that it will add maritime connectivity services from Intelsat S.A. to its portfolio of connectivity solutions. Under the agreement, Navarino will introduce innovative Intelsat satellite services delivered from the award-winning IntelsatOne Flex platform, a global managed service designed to optimize bandwidth allocations and provide flexible coverage where it is needed most. With this service set to be introduced to customers in O3 2018, Navarino CEO Dimitris Tsikopoulos is expecting a high level of interest in the new possibilities that the Intelsat/Navarino collaboration will bring.

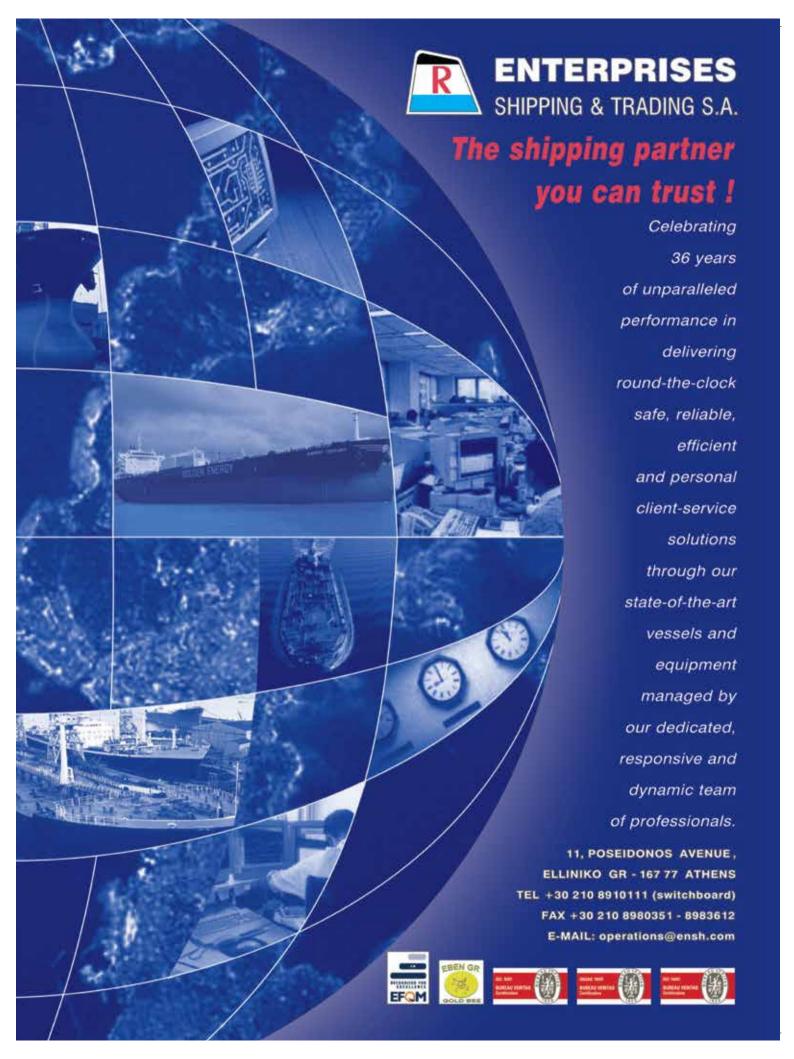
"Intelsat is one of the satellite industry's most experienced and respected providers. We are excited to begin working with them to bring multi-layered HTS global coverage and pioneering new Ku-band offerings to the maritime marketplace, offerings which have the potential to be really innovative in terms of how connectivity is packaged and delivered. Navarino has a vast amount of experience in the maritime satcom market. We have witnessed first-hand how increasingly critical connectivity is as an enabler for managing vessel networks and IT infrastructure. Simultaneously, we have also seen that there are certain sectors of our marketplace which are looking for highly specialized types of connectivity that the current market cannot cater to. Our collaboration with Intelsat will enable us to address this wide variety of maritime communications requirements by delivering a tailored, high-throughput global connectivity solution."

"Maritime customers are demanding a robust, flexible and resilient platform that supports their growing business needs and meets the demands of vessel and crew,' said Intelsat's Mark Rasmussen, Vice President and General Manager, Mobility. 'With Intelsat's Globalized Network and IntelsatOne Flex services, Navarino can tailor solutions to meet customers' requirements and offer more differentiated products. The addition of IntelsatOne Flex capabilities will add a level of service, coverage and throughput that has historically not been available in the marketplace, and customers will see that translate into real operational improvements that will positively impact the bottom line."

### SOx Scrubbers by Kangrim Heavy Industries

Kangrim Heavy Industries has developed a U-Type scrubber, holding 5 main patents. The system operates in an open loop, utilizing seawater to remove SOx from the exhaust. Exhaust gas enters the scrubber and is sprayed with water in three different stages. The Sulphur Oxide in the exhaust reacts with water and forms Sulphuric acid. There is no need for chemicals since the natural alkalinity of seawater neutralizes the acid.

Kangrim's Open Loop Scrubber system benefits from their 30-years know-how. Kangrim applies IGS/IGG Scrubber manufacturing technology, which has developed over 30 years, to SOx scrubber to ensure high quality and stable performance. Kangrim's SOx scrubbers are been manufactured in South Korea in Kangrim's Changwon and Pohang factories of about 250,000 square meters, with a production capacity of up to 50 scrubbers per month and a lead time of 8 months from order. Kangrim provides stable after sales service through a worldwide established AS network for Boilers and Inert Gas Systems/Generators in 72 places. Kangrim is considered today the world's leading producer of marine equipment who Shipowners trust for the quality, experience and manufacturing capabilities that can meet the recently concentrated demand on SOx scrubbers at competitive rates. Kangrim is exclusively represented in Greece and Cyprus from Franman since 2002, promoting with great success their Boilers, IGG and IGS to newbuilding and retrofit projects. Franman is also an authorized Service Station of Kangrim in Greece.



# Are seafarers happy at work?





The Seafarers Happiness Index (SHI) survey was launched in 2015 by The Mission to Seafarers, a Christian welfare charity, in order to monitor and benchmark seafarer satisfaction levels by asking 10 key questions that serve as an important barometer of seafarer satisfaction with life at sea. The questionnaire, which is distributed to global seafarers four times a year, focuses on a range of issues from mental health and wellbeing, to work life and family contact.

By Charis Pappas

The SHI highlights interesting and thought-provoking statistics. For instance, the average Seafarer Happiness Index for the second quarter of 2018 stood at 6.56 out of 10, which shows a fall from the previous quarter's average of 6.69. Of more interest is the rising sense of professional pride and excitement at being a seafarer, which seems to be related to the "lifestyle" of going to sea and providing an income for one's family.

The happiest respondents were in the 25-35-year age group while, as the researchers explained, these figures were impacted by the ability to access the internet and feel connected with the shore. The issue of communication with family and, therefore, connectivity, is perhaps the most significant issue raised by the seafarers.

This time around, female seafarers actually rated themselves much lower than males, even lower than the general average. Once more, this finding shed light on a long-standing challenge in the industry,

namely that of women as maritime professionals and the obstacles that arise on their way to the top. Since the happiness index shows the perception of individual respondents, it is worth noting that some may be more critical than others. In general, the seafarers who responded expressed themselves in a very positive way about their fellow shipmates, talking in terms of friendships, professionalism, and support. It seems, therefore, that the micro-social environment onboard may have improved compared to the past.

Another key finding is that the respondents emphasized how much happier they feel when the food onboard is good. As the researchers mention, food is an extremely important part of shipboard life —not simply as a fuel to sustain the crew, but also as a means of making them feel content and cared for, even a means of safeguarding the bonds between those onboard. If one considers the cultural diversity onboard, this finding underlines the role of the ship management company as a pro-

II8

# Most people see a sunrise. Our people see the dawn of an exciting career.



At Maran Tankers Management, we fully appreciate the demands our industry places on seafaring and shore-based personnel. Ever since 1947, we've ensured that through the safe, efficient and environmentally-sustainable operation of our vessels, our company will remain a paragon of stability not only in our industry but in the lives and careers of our people as well.

Which is why, with us, every working day becomes a building block towards an exciting career.



MARAN TANKERS MANAGEMENT INC.

www.marantankers.gr









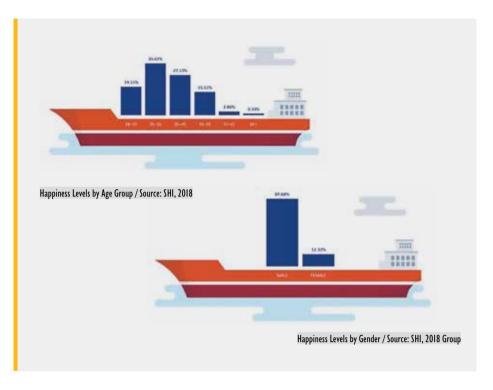


#### **SEAFARERS**

vider of supplies to the fleet but also the role of a cook's skills. Furthermore, the participants highlighted the importance of seafarer welfare centers, which make a real difference to the quality of their life when they are visiting foreign ports. Fortunately, all these crucial points have been considered by the international maritime regulatory bodies and are covered by the Maritime Labour Convention (MLC2006) in an attempt to deal with cases of poor welfare services onboard and ashore.

From the results of the SHI it is important to highlight the following points, which seem to negatively affect seafarer happiness:

- Connectivity is still the number one demand for seafarers. They feel that isolation, loneliness, and boredom are major issues, regardless of the fact that the duration of contracts has been reduced in comparison to the past. A large number of ship management companies are now offering their sailing crew the opportunity to communicate regularly with their families. At the same time, however, there are industry stakeholders who doubt that regular communication with family has any effect on the low or non-existent socialization on board or on the limited awareness of seafarers regarding the use of social media - both of which affect a vessel's safe operation.
- Fatigue and stress due to continuous inspections and paperwork were mentioned repeatedly by respondents. They reported spending more time completing the paper work for a task than on the task itself. Paperwork, along with frequent port calls and the limited time spent at the ports visited increase seafarers' stress levels.
- Boredom is a major factor at sea, where repetitive tasks are part of the daily routine. Shore leave is still viewed as important, and the chance to break free from the normal routine is seen as being hugely beneficial. However, restrictions, strict security and high costs placed on seafarers are seen as being majorly significant and as having a negative effect.
- The managers' and office personnel's



lack of experience or knowledge is perceived as the reason for the tremendous work pressure felt by seafarers. More specifically, respondents claimed that they are being asked more and more questions and being pushed to respond, while they believe that when it comes to management systems, recommendations by shipboard staff are all too often ignored. Overall, ship-shore collaboration is a major problem in many shipping companies, especially in cases where the corporate safety culture is dysfunctional.

Pay "discrimination" for different seafarer nationalities is causing frustration and anger. The globalized maritime labour market promotes the mobility of seafarers in different companies all around the world, while the various flag regimes allow for mixing different nationalities onboard. However, whereas the MLC2006 provides guidance on 'same wages for the same job, regardless of nationality', the current maritime labour terms and conditions vary to a great degree. The lack of collective bargaining agreements in several maritime labour countries and the existence of bilateral and multilateral agreements in limited cases, along with the dy-

- namics of labour supply and demand, make for quite an unusual work environment.
- Food is a very sensitive issue and there can be social problems onboard in cases where the standard of cooking or provisions are felt to be inadequate. Catering is vitally important. The standards, experience, and training of cooks are a concern which fortunately seems to be improving following the implementation of the revised STCW and the MLC.
- Maritime training is seen as important, but seafarers resent the impact of training on their leave. Other surveys show that the standard CBT (computer-based training) onboard has become obsolete and ineffective, whereas other forms like on-the-job training are favoured more.

Seafaring is obviously very different to "everyday life" ashore. However, it is worth mentioning that if one was to benchmark and compare the SHI to the 2018 World Happiness Report (a survey of the state of global happiness by country) as if seafarers were citizens of one's own country, then this quarter's Happiness Index (6.56) would place them just outside the top twenty nations, sitting at 23rd place in the global rankings, between Malta (6.627) and France (6.489).



# In Pursuit of Excellence



H Polembros είναι μια από τις κορυφαίες εταιρίες διαχείρισης πλοίων με περισσότερα από 40 χρόνια εμπειρία στην μεταφορά πετρελαίου και χύδην ξηρού φορτίου και απόλυτη αφοσίωση στην ασφάλεια και την αποτελεσματικότητα.

· Συνεχώς αναπτυσσόμενος, σύγχρονος στόλος - πλοία υπό Ελληνική σημαία · Φιλικό, ασφαλές περιβάλλον εργασίας με υψηλά επίπεδα διαβίωσης εν πλω · Συνεχής επιμόρφωση ναυτικών και δυναμικό πρόγραμμα κατάρτισης δοκίμων · Ανταγωνιστικές αποδοχές και προοπτικές γρήγορης ανέλιξης

Επικοινωνήστε μαζί μας τηλεφωνικώς ή στέλνοντας την αίτηση σας μέσω της ιστοσελίδας μας.

Λεωφόρος Ποσειδώνος 57Α • Μοσχάτο 18344 • Αθήνα • +30 2104580300 • www.polembros.gr

# Greek Maritime Golf Event: The meeting point for the Greek shipping community





For the fourth consecutive year, Greece's most popular shipping golf tournament, the "Greek Maritime Golf Event", took place on the 29 and 30 September 2018 on the premises and golf courses of Costa Navarino in Messinia, Greece. Due to heavy rain, the first day 's games were cancelled and moved to the following day, giving the golfers the opportunity to experience various indoor activities at the Costa Navarino resort.

The first day was concluded with a gala event and dinner attended by I80 guests who enjoyed dinner and were offered various prizes by the sponsors of the tournament. The golf competition took place on the 2nd day of the Greek Maritime Golf Event at the Bay Course and was followed by the Prize Awards Ceremony on the veranda of the resort's Flame restaurant.

The "Greek Maritime Golf Event" is an initiative of the Greek PGA Professionals Thanos and Panagiotis Karantzias that has become a tradition attracting every year distinguished members of the shipping community who share their love and passion for golf as well as their interest in the shipping business.

The event's sponsors were the Marshall Islands Registry (Platinum Sponsor), Mainline Shipping Company and Onego Shipping Company (Gold Sponsors) as well as *Naftika Chronika*, which this year was once again one of the Communication Sponsors of the "Greek Maritime Golf Event".



#### Photo I

All the Sponsors of the event and the winners of the lottery.

#### Photo 2

The organizers of the "Greek Maritime Golf Event", Karantzias Thanos and Karantzias Panos.

#### Photo 3

The premises of Costa Navarino in Messinia, Greece.

#### Photo 4

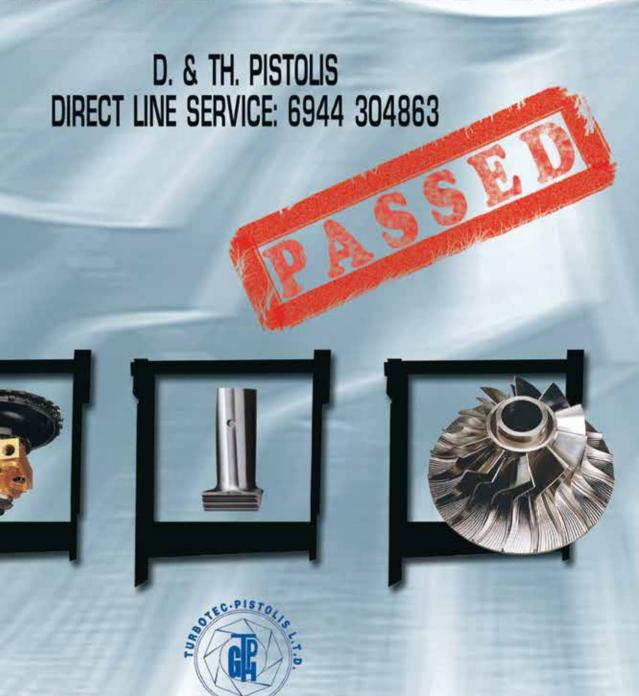
Photo shot from the Maritime Golf Event.



ABS ISO 9001:2000

# TURBOTEC-PISTOLIS L.T.D.

CREATIVE STUDIO M GALLEGOS 6944 224457



123 DIMOKRATIAS Av. GR 18863 PERAMA-PIRAEUS
TEL: 0030 210 4415 963, + 210 4022 794, 6944 596079 FAX + 210 4414 104
www.turbotec-pistolis.com\_turbopis@hol.gr



Cyber secured.





The first fully managed maritime cyber security solution

Powered by Navarino | Neurosoft