Posidonia Today

No. 3 Wednesday 6 June 2018



Maritime energy agenda set

Clean fuel is one of global shipping's hottest topics as the International Maritime Organization (IMO) 2020 deadline for a global sulphur limit in fuel oil used on board ships is fast approaching. As European Commissioner for Transport Violeta Bulc warned during the June 4 official opening ceremony of Posidonia 2018, the European Union's 'Vision of Zero Emissions from transport by 2050', would have additional long-term implications for shipowners worldwide.

"The global sulphur cap brings valuable opportunities for the EU manufacturing industry and Europe is leading the development on the use of LNG as a fuel for shipping, which attracts strong interest also in other regions of the world," Bulc said.

IMO secretary-general, Kitack Lim, said: "We must ensure that the opportunities presented by modern 'mega trends' like digitalization, artificial intelligence and the so-called 'fourth industrial revolution' are carefully integrated into shipping, balancing the benefits against safety and security concerns, the impact on the environment, on international trade, and on the human element Indeed, the future of maritime

transport is inescapably linked with the welfare of people and the planet, and it not at all surprising that the global approach on decarbonisation and environmental sustainability is very much a hot topic on the exhibition floor at Posidonia, where shipbuilders, engine manufacturers and scrubber providers are showcasing their clean fuel plans and strategies vying to attract the attention of shipowners and fleet operators.

But how are the big players from the Far East positioned in the race for clean fuel supremacy? China, Japan and Korea, who hold impressive newbuilding order pipelines from European and Greek shipowners, have once again fielded their impressive pavilions at Posidonia with the imposing presence of their shipbuilding companies.

Tohru Kitamura, executive vp of Mitsubishi Shipbuilding, said: "We are already prepared for the installation of LNG fuel for various types of vessel, but in Japan the domestic Japanese owners have not decided yet which way to go, LNG fuel, crude fuel or other types of fuel. At least 4,500 vessels belong to domestic owners and of the total newbuilding order book of Mitsubishi, international shipowners account for less than half of

our production.

"At Mitsubishi we have various kinds of technologies regarding fuel for example ethanol and LPG fuel. There is an increasing environmental consciousness in Japan as a result of the looming 2020 deadline and several owners will decide to apply our own scrubber system, others will select the low sulphur fuel system and moreover in Japan there are many kinds of small cargo vessels with small gross tonnage and those owners have not yet decided."

Indeed, Kitamura was speaking after signing a Letter of Intent with China's Cosco Shipping for the manufacturing of a new scrubber demo test facility.

Steven Zhang, head of repair and conversion, Cosco Shipping said: "LNG is the future and it is a big part of China's environmental policy. Our government is very strict on the protection of the environment. We have a main area for low sulphur oil burning during the vessel discharging process. We are researching how to retrofit the main engine with LNG tanks and are investing in partnership with GTT, a French LNG solution provider, who are supporting us on the LNG retrofitting project. More and more LNG vessels are discharging in China and docking in China."

Wilhelmsen to lift off with drones

In a sign of how fast technology is changing, Wilhelmsen signed an MOU with Airbus at Posidonia yesterday to develop an Unmanned Air System (UAS) for the delivery of ship supplies.

The UAS project will begin with a two-week pilot trial taking place in one of the world's busiest ports, Singapore, in Q3. Wilhelmsen Ships Service (WSS) will work with Airbus' Skyways to deliver spare parts, documents, water test kits and 3D printed consumables to vessels at anchorage from Singapore port's Marina South Pier.

"We are absolutely thrilled to be working with a forward thinking, industry leader like Airbus," said Marius Johansen, vp commercial, Ships Agency at WSS. "As an outward looking company, eager to utilise technology to help improve our customers' experiences, drone delivery is a perfect fit for our agency business," he added.

WSS believes that the quicker response rate and turnaround time of UAS compared to launch boat deliveries means it has the potential to lower shore-to-ship delivery costs by up to 90%, as well as remove human safety risks.

"This collaboration with Wilhelmsen, the first of its kind in the region, gives us a unique test bed where we can trial, refine and shape the future of shore-to-ship drone technologies," commented Leo Jeoh, who leads up Airbus' Skyways.





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





PosidoniaToday Wednesday 6 June 2018

LR does the right thing



Guests visiting Lloyd's Register stand 4.201 will have the chance to donate to one of three local charities by registering to use LR's digital table, which inter alia provides strategies for compliance with the 2020 Global Sulphur cap.

Marine director Nick Brown explained at a press conference at the show yesterday that the sulphur compliance choice is extremely complex, depending on factors such as vessel

type, size, age and operating profile.

Stand visitors will also be able to sample ethically sourced coffee from BySea, which donate 100% of profits to sailors' Society.

Meanwhile, LR Group ceo Alistair Marsh said he was delighted to be attending his second Posidonia in his current role. "it's even bigger than last time," he observed, "and really is becoming the world's pre-eminent shipping event."

Future of bunkering

A new, ambitious LNG Bunkering project was presented yesterday at Posidonia: probunkers, an innovative multimillion dollar global-scale project which offers the opportunity to invest in two fundamental and dynamic industries, shipping and energy.

probunkers will design, build and operate a fleet of modern, ecofriendly LNG bunkering vessels to embrace the ever-changing needs of global shipping. The project, which involves planning, financing, implementation, operations and sale, will have a three-tier role, as physical

supplier, LNG trader/seller and barge owner and operator. The three fold business model includes investment, trading and finance elements. The multi-layer model involves operations, LNG buying and selling, logistics and marketing.

probunkers Holding was

established in 2017 in Cyprus but is headquartered in Athens. Led by directors Costas Hassiotis and Panos Yannoulis and ceo Alexander Prokopakis, the company was introduced through a corporate video to the full house Posidonia Seminar Room Central.

Prokopakis said: "I anticipate 2018 to be a landmark year for the expansion of LNG as a marine fuel into shipping. We are determined to turn probunkers into a world-class investment opportunity and fulfill our vision to build a reliable global-scale LNG bunkering network."







serving with commitment and dedication to deliver quality and earn your trust

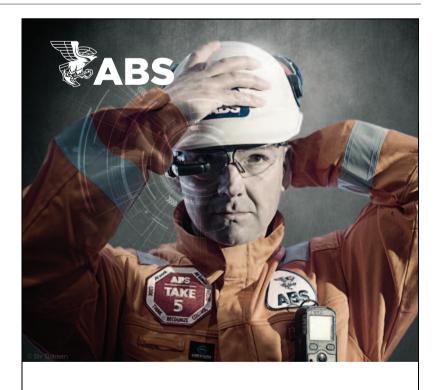
since 1968



6, Agias Kyriakis, 175 64 Paleo Faliro, Greece tel: +30 210 4113 916 fax: +30 210 4122 450

Shisto: Industrial Park of Shisto

Aspropyrgos: Spinthari, 3 00 Aspropyrgos, Greece /fax: +30 210 5596 306



LEADING THE FUTURE

Join us on stand 3.101 today at 14:30 where we will be holding a reception to hear the latest on LNG as fuel initiative "Project Forward".

Stand 3.101

LEADING THE FUTURE www.eagle.org

Organiser	Event	Venue	Time	Contact Organiser
	Wednesday 6 J			
	•			
Maritime London	UK-Greece: Maintaining a close relationship post-Brexit	UK Ambassador's Residence in Athens	09:00-13:00	ojaques@maritimelondon.com
HELMEPA	2020 is closer than we think: Scrubbers, Fuels and BWT	Conference Hall	10:30-14:30	helmepa@helmepa.gr
BIMCO	BIMCO's Shipping Analyst Panel debate with focus on the future tank and dry bulk market	Seminar Room Central	10:30-14:30	ej@bimco.org
South African Embassy in Athens	South African Ocean Economy Opportunities	Seminar Room 2A	10:30-12:30	KapoutsisD@dirco.gov.za
Intellian Technologies ADMIRALTY Maritime Data Solutions	Intellian Technologies Seminar	Seminar Room 2B	10:30-12:30	Summer.Lee@intelliantech.com
MarineTraffic	ADMIRALTY Living with ECDIS seminars MarineTraffic Daily Seminars	Seminar Room 1, Sponsored by ADMIRALTY MarineTraffic, Booth # 4.118	11:00-13:30 11:00-15:30	UKHOevents@ct-live.com nicola.perobelli@marinetraffic.com
Cruise Lines International Association	CLIA Cocktail Reception	Hemexpo Stand #3.131	12:30-13:30	nhallgearing@cruising.org
International Paint	Managing hull performance for operational efficiencies	Seminar Room 2A	12:45-14:30	Wouter.tenHaaf@akzonobel.com Nikos.Mintzias@akzonobel.com
Prevention at Sea	Press Event	Stand 3.221, Hall 3	13:00-14:00	ppage@elabor8.co.uk
MedCruise	MedCruise Presentation	Seminar Room 1, Sponsored by ADMIRALTY	13:45-15:30	secretariat@medcruise.com
Inmarsat	Inmarsat Briefing	Meeting Room 1	14:00-15:15	By invitation only Please contact debbi.bonner@j-l-a.com
RINA	RINA marine digital strategy	Seminar Room Central	14:45-16:45	greece@rina.org
SpecTec - Bureau Veritas	SpecTec and Bureau Veritas - a next generation solution for asset integrity management	Seminar Room 2A	14:45-16:45	caterina.guidotti@spectec.net
Panasia Co., Ltd	Panasia environmental solution for BWTS and SCRUBBER with IoT	Seminar Room 2B	14:45-16:45	marketing@worldpanasia.com
Ecochlor, Inc.	Ballast Water Treatment: Knowledge is Compliance	Seminar Room 1, Sponsored by ADMIRALTY	16:30-18:00	kathie.clark@ecochlor.com
Embassy of the Republic of Korea - IOBE	Korean-Hellenic Maritime Cooperation Forum	Conference Hall	16:30-19:00	eubko13@mofa.go.kr
PSB & CO. S.A.	Papadakis Group of Companies introduces POT SOx SCRUBBERS systems	Seminar Room Central	17:00-19:00	technical@psbpapadakis.gr
Piraeus Port Authority SNAME	Situation awareness solution for protecting European ports: EU Project "SAURON" "Maritime Accident Investigation, Marine Claims, Salvage and Wreck removal. To Err is Engineering" Marriage of Disciplines Provides Answers to Complex Engineering Problems	Seminar Room 2A Seminar Room 2B	17:00-19:00 17:00-19:00	ypapagiannopoulos@olp.gr siliogrammenou@sname.org
Korea Marine Equipment Research Institute	Export Business Meeting with Ulsan Pavilion (Korean Night)	Sofitel Athens Airport Hotel	17:00-20:30	info@tess-intl.com
		·		
	Thursday 7 Ju	ine		
Newsfront/ Naftiliaki organises the HEMEXPO summit under the auspices of MARTECMA	Support the Local Maritime Industry Summit	Conference Hall	10:30-15:30	natvas@otenet.gr
American-Hellenic Chamber of Commerce (AMCHAM)/ NAMEPA/ U.S. Commercial Section of the U.S. Embassy in Athens	Trading in US Waters: Priorities and Solutions, Seminar	Seminar Room Central	10:30-14:30	v.tseritzoglou@amcham.gr; j.seyer@namepa.net; maria.georgousi@trade.gov
ICC International Court of Arbitration	Claims and Dispute Resolution in International Maritime Contracts – ICC Tools	Seminar Room 2A	10:30-14:30	ileana.delattre@iccwbo.org
KRAL AG	Long-term competitive advantage for ship owners in regard to the EU MRV / IMO DCS maritime regulations involving flow measurement	Seminar Room 2B	11:30-12:30	a.picca@kral.at
ADMIRALTY Maritime Data Solutions	ADMIRALTY Living with ECDIS seminars	Seminar Room 1, Sponsored by ADMIRALTY	11:00-13:30	UKHOevents@ct-live.com
MarineTraffic	MarineTraffic Daily Seminars	MarineTraffic, Booth # 4.118	11:00-18:00	nicola.perobelli@marinetraffic.com
SAP Hellas	Shipping the Future with SAP	Seminar Room 2B	12:45-14:30	a.mantziou@sap.com
Filtersafe	Filtersafe SuperTurbo Product Launch: An Innovation for BWMS Pre-treatment Filtration	Seminar Room 1, Sponsored by ADMIRALTY	14:00-16:00	Jennifer@filtersafe.net
Blue Growth	Presentation of Emerging Piraeus Maritime Startups The French Sea Tech	Seminar Room 2A	14:45-16:45	bluegrowthaephoria@gmail.com
French Hellenic Chamber of Commerce (CCIFG) Aktina Travel Group	The French Sea Tech GDPR and Cyber Security: The practical approach	Seminar Room Central Seminar Room 2B	15:00-19:00 15:00-17:00	c.manali@ccifhel.org.gr lefteris.konstantopoulos@aktinatravelgroup.cor
Isalos.net and Real Time Graduates	The next chapter in shipping: A new era of Ship Managers in the age of digitalization	Conference Hall	16:30-17:00	info@isalos.net
Orange Business Services & Futurenautics	Orange Sofa - The Infonomics of Shipping in the era of the loSea	Seminar Room 1, Sponsored by ADMIRALTY	16:30-19:00	lorelei.robert@orange.com
Verifavia Shipping Hellas	Verifavia Shipping Seminar "The EU MRV, IMO DCS, CSI & CCWG Regulations"	Seminar Room 2A	17:00-19:00	nikolas.theodorou@verifavia-shipping.com
Hellenic Institute of Marine Technology	Marine LNG: Prospects and Barriers	Seminar Room 2B	17:00-19:00	elint@otenet.gr
	Friday 8 Jun			
YES FORUM	•		10-20-17-00	navigator@navigatorltd.gr.ddb@navigato-ltd.
Dell EMC	YES to Shipping Forum 2018 Digital Transformation in Shipping Make It Real	Conference Hall Seminar Room 2A	10:30-17:00	navigator@navigatorltd.gr; ddb@navigatorltd.gr Sinead.Mcallister@dell.com
MediaCompass Ukraine and Ukrainian Maritime	Digital Transformation in Shipping: Make It Real Marine Cargo Insurance at the cross-roads: East-West-South-North aspects	Seminar Room 2A Seminar Room 2B	10:30-12:30 10:30-17:00	zerkalova.odessa@mku.com.ua
Bar Association		Semilar Room 25	10.50 17.00	+38 094 924 32 96
Union of Greek Shipowners	UGS Press Conference	Seminar Room Central	11:00-12:30	posidonia press@extrovert.gr
MarineTraffic	MarineTraffic Daily Seminars	MarineTraffic, Booth # 4.118	11:00-11:30	nicola.perobelli@marinetraffic.com
	Selecting the right Diaphragm Pump for my application	Seminar Room 1, Sponsored by ADMIRALTY	11:00-11:45	info@anelysis.com
Anelysis PCC		Combined to the ADMIDALTY	12:00-12:45	info@anelysis.com
Anelysis PCC Anelysis PCC	Automatic Lubrication On-board	Seminar Room 1, Sponsored by ADMIRALTY		- '
Anelysis PCC Anelysis PCC Institute of Energy for South East Europe (IENE)	4th Energy & Shipping Seminar	Seminar Room Central	12:30-16:30	secretariat@iene.gr; marketing@iene.gr
Anelysis PCC Anelysis PCC Institute of Energy for South East Europe (IENE) VENLYS Maritime Specialisation Services	4th Energy & Shipping Seminar Human Performance 2.0: Integrating Safety Intelligence within continuous improvement	Seminar Room Central Seminar Room 2A	12:30-16:30 12:45-14:30	secretariat@iene.gr; marketing@iene.gr alexandros.koimtzoglou@venlys.com
Anelysis PCC Anelysis PCC Institute of Energy for South East Europe (IENE) VENLYS Maritime Specialisation Services Anelysis PCC	4th Energy & Shipping Seminar Human Performance 2.0: Integrating Safety Intelligence within continuous improvement Cranes and wire ropes lubrication	Seminar Room Central Seminar Room 2A Seminar Room 1, Sponsored by ADMIRALTY	12:30-16:30 12:45-14:30 13:00-13:45	secretariat@iene.gr; marketing@iene.gr alexandros.koimtzoglou@venlys.com info@anelysis.com
Anelysis PCC Anelysis PCC Institute of Energy for South East Europe (IENE) VENLYS Maritime Specialisation Services Anelysis PCC Anelysis PCC Anelysis PCC	4th Energy & Shipping Seminar Human Performance 2.0: Integrating Safety Intelligence within continuous improvement	Seminar Room Central Seminar Room 2A	12:30-16:30 12:45-14:30	secretariat@iene.gr; marketing@iene.gr alexandros.koimtzoglou@venlys.com

Ecochlor in major Greek BWTS deal

One of the largest Greek shipowners Angelicoussis Shipping Group Limited (ASGL) recently opted for Ecochlor to retrofit 36 large vessels with Ballast Water Treatment Systems (BWTS).

The deal covers both tankers for Maran Tankers and bulkers for Anangel Maritime Services, with work to be carried out between 2018 and 2020 at yards in Singapore, Dubai, Qatar and China.

"We look forward to working with both Maran and Anangel to retrofit their fleet of vessels and continuing to support their efforts in satisfying regulatory compliance," commented



Ecochlor president Tom Perlich (pictured).

Ecochlor is present at Posidonia on its agent Euploia Drydocks' stand no. 1.115.

Revamped Honduras Registry debuts at Posidonia

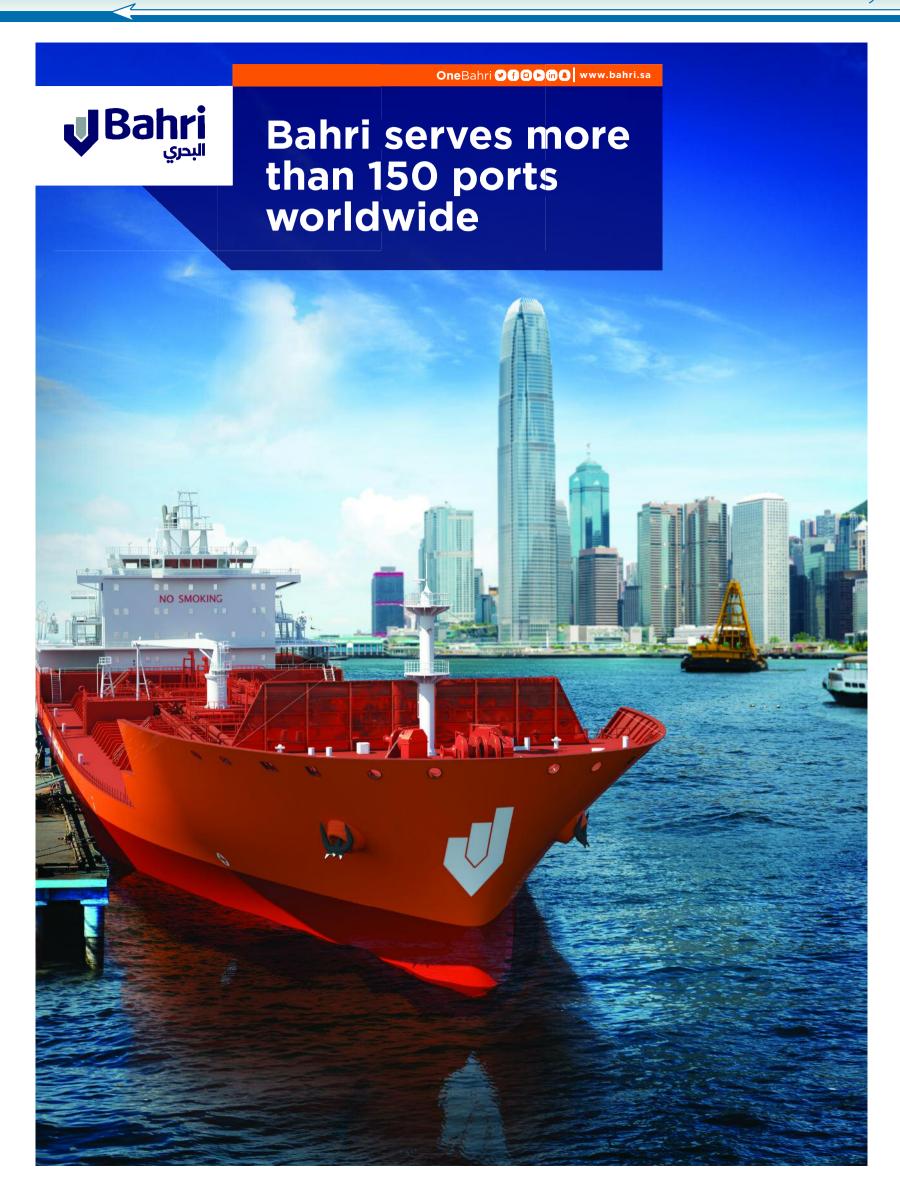
The General Directorate of the Merchant Marine (DGMM) of Honduras, which oversees the country's Ship Registry, has decided to contract the international management of the flag to Panamanian company International MarConsult (IMC). President of IMC is well-known industry figure Ruben Reyna, who was first administrator of the Panama Maritime Authority in 1998.

The measure does not mean that the Honduran DGMM ceases to operate, far from it, but will have an external representation with knowledge of the international maritime sector to

effectively promote the flag internationally and with an effective global coverage 24/7. IMC will be able to issue provisional patents directly and through their international delegates.

"IMC and IMC Legal Services have been working in the maritime sector for 20 years during which we have provided our flag service, among others, to ship owners and seafarers," says Reyna. "Our customers will be assured of our honesty and our commitment to the international maritime world that quality is first."

Visit the Honduras Ship Registry at Posidonia on stand no. 1.343.



PosidoniaToday

Owners optimistic on LNG rates

Top Greek shipowners are optimistic about the charter rate outlook for LNG, although express concerns over the tender process and shorter periods adopted by some charterers.

John Angelicoussis, chairman of Angelicoussis Shipping Group, speaking at ABS's The Future of LNG Shipping 2018 event, said: "I personally feel the bottom of the market in a cyclical sense was in early 2016 when we hit the bottom for energy prices; at that time it was the lowest rates for LNG. I think from there on for every year we see higher rates depending on the season."



John A Angelicoussis: "We take all the risk."

Gaslog executive chairman, Peter Livanos was also positive. "We're definitely in a short term tightening cycle although I do believe in the medium to long term rates will be capped in terms of the economic value of the ability to buy and sell gas in different locations around." he said.

"So I don't see medium and long term rates developing as a continuous basis as an upward trend, but rather reaching a steady state situation."

Similarly George Procopiou, chairman of Dynacom Tankers
Management, did not expect rates to soar but to reach sustainable levels. "I do believe the rates of today are low so if you add the running cost of an organisation they don't add up.
Nobody can subside somebody else's business so they have to rise to levels that are sustainable. I don't believe in extremes, it's a steady business with high capital, but low returns."

Discussing the shift by some charterers to a tender process and shorter terms, there were concerns that it was starting to commoditise the market.

Angelicoussis stated: "With the tender process charterers use the tender process to bring rates.

"Liquefaction plants are not built for five to seven years, why are we getting five to seven years deals with option periods? We take all the risk for the vessel and basically no return on our capital sometimes."



LNG set to be dominant marine fuel

Leading Greek shipowners see the use of LNG as the future fuel for the shipping industry, but the lack of infrastructure development is holding back adoption.

Coming out strongly in favour of LNG as a marine fuel was GasLog chairman Peter Livanos, speaking at an ABS event on the future of LNG shipping. "It's inevitable that LNG becomes the primary source of fuel for marine transportation," he stated. "The train has left the station, and it will dominate marine fuels."

However, some issues do remain in terms of when the switch from oil to gas is made. "In terms of timing there are two issues the industry is going to have to address. I think the lack of LNG infrastructure today is acting as a brake against early adoption of LNG as marine fuel, but that should accelerate.

"And then there is the lifecycle of the existing assets and to what extent you replace existing assets with LNG ready or LNG capable, and its coming."

John Angelicoussis, chairman
Angelicoussis Shipping Group, also
highlighted the lack of bunkering
infrastructure. "I agree, except you
cannot yet find bunkering stations for
LNG so you need a dual fuel vessel,
which is quite expensive, I would say
prohibitively expensive right now, even
for smaller vessels," he stated.
"Definitely LNG is much cheaper than
any other type of hydrocarbon but it is

still a hydrocarbon."

Christopher Wiernicki, chairman, president and ceo ABS, was also positive on the future of LNG as a marine fuel and sees infrastructure developments starting to make headway.

"It will probably be the most sustainable option going forward. If you look there are 140 [LNG powered newbuildings] on order, 70% of those are deepsea or blue water, there are some very well thought out designs; here in Greece there is Project Forward," he said.

"The infrastructure is getting better – there is a lot of work being done on the infrastructure in the US, Singapore, Rotterdam, and the regulatory framework is actually in place."

Big three hit out at use of third party managers

Greek shipowner Peter Livanos took aim at asset based owners who do not run their own vessels in LNG and other shipping sectors as "irresponsible" at an ABS panel on the future of LNG shipping.

Asked by session moderator Michael Tusiani, chairman emeritus of Poten & Partners, about owners in the LNG sector who have chosen to farm the operation of their vessels out to third party managers and whether this was acceptable to charterers was met with a sharp rebuttal from Livanos, executive chairman of GasLog. He found agreement from fellow panellists John Angelicoussis, chairman Angelicoussis Shipping Group, and George Procopiou, chairman of Dynacom Tankers Management.

"It's probably the single largest differentiator about the three of us here, the fact that we've invested in our own internal systems and continue to drive their quality going forward, and I have very little respect for someone who doesn't feel it's worthwhile to run their own ships whether it be in LNG or any other sector," stated Livanos.

Angelicoussis said, "I entirely agree with you, our charterers think so at least", while Procopiou said, "It was a must to run your own vessels."

However, Tusiani commented: "Newcomers come in and use third parties and it seems very acceptable to charterers."

In a stinging response Livanos stated: "We have an accident and we kill



Peter G Livanos: "Must take full responsibility in the way you run your assets."

someone and it's unbelievable costly morally and financially, and the only way you can legitimately guard against that is to take full responsibility in the way you run your assets.

"To give that out to someone on a financial basis because they can do it cheaper or because you can't do it and they can do it, so that gives you the right to own that asset, is irresponsible, because at the end of the day the accountability you have in your own operations is fundamentally critical to the asset integrity you want to maintain and use.

"That's the way all three of us here run our businesses and we're not going to change if someone pays us a bit less. Because at the end of the day if there's an incident its our reputation at risk."

Procopiou said Livanos had "presented exactly their feelings" and added that the "proof of the pudding was in the eating" and that he didn't see any growth from people who had used these kind of strategies.

Maersk Fluid Technology automates SEA-Mate BOB technology

Originally developed by Maersk for use on A.P. Moller-Maersk's container ships, Maersk Fluid Technology (MFT) has advanced their SEA-Mate® Blending-on-Board (BOB) technology with integrated software that automates the system's function to produce fit-forpurpose cylinder lubricants using data received from sensors onboard.

BOB technology allows for the blending of the in-use system oil, as a base oil, with a high-BN cylinder oil product to produce a fit-for-purpose cylinder lubricant and facilitate the addition of fresh system oil to the engine sump.

Use of this technology can reduce cylinder oil consumption and alleviate issues such as cold corrosion and excessive cylinder wear. It can also mitigate issues associated with worn system oil causing problems for the hydraulic control system in modern, electronic controlled two-stroke engines.

The SEA-Mate® BOB product line is comprised of three models; B500, B1000 and B3000. These have had different capacity making them suitable for different engine sizes.



The new model range B500 Mk2, B1000 Mk2, B3000 Mk2 will continue to have many of the tried and tested characteristics, with the main difference being in the control system.

Henrik Bak Weimar, technical and operational manager of MFT, said: "We continuously strive to improve the BOB technology to deliver new generations of all models for our customers. Our developments of the automated versions of the BOB system models are a result of extensive operational experience onboard vessels. The new generation of blenders meets expectation of modern engines' operators."

To hear the latest MFT developments visit their agent Technava's stand no.3.111.



DNV GL: IMO 50% carbon reduction 'ambitious but not unachievable'

DNV GL chief Remi Eriksen says that the International Maritime Organization's (IMO) 50% carbon reduction for shipping is ambitious but not unachievable.

Speaking at press conference in Athens, Eriksen said "The IMO strategy announced last month targets a 50% carbon reduction. This is ambitious but not unachievable. We see some companies leading the way, and more efficient ship designs and better ship utilisation will propel this."

Knut Ørbeck-Nilssen, ceo of DNV GL – Maritime, said that decarbonising shipping required concrete policy measures and the development of an action plan by IMO.

"The 50% reduction goal will likely call for a wide-spread uptake of zerocarbon fuels, in addition to other energy efficiency measures," he said.

"These fuels are not existing today, and there needs to be a concerted effort towards developing these and making them available in the necessary quantity. In classification, working with the industry to create a safe and sustainable future is at the heart of what we do. We look forward to working closely with the IMO and the wider maritime community to reach this goal."



Posidonia 2018 Shuttle Bus Programme

Tuesday 29/5 to Sunday 3/6 Roundtrips throughout the day from 07.45 to 20.15 Monday 4/6 Roundtrips throughout the day from 11.00 to 21.00 Tuesday 5/6 to Thursday 7/6 Roundtrips throughout the day from 10.00 to 19.30 Friday 8/6 Roundtrips throughout the day from 10.00 to 19.30 Roundtrips throughout the day from 10.00 to 18.00	Route 1	 ■ Koropi Metro Station > > Athens International Airport > Metropolitan Expo 	Metro Station ▶	
Tuesday 5/6 to Thursday 7/6 Friday 8/6 Roundtrips throughout the day from 10.00 to 19.30 (Note: Route 1 services Sofitel at Airport) Sponsored by Metropolitan Expo Departures from Syntagma Square: Return from Metropolitan Expo: 18.30, 19.00 and 19.15 Palmyra Hotel ➤ London Hotel ➤ Amarilia (Faliro - Glyfada area) Metropolitan Expo Tuesday 5/6 to Thursday 7/6 Palmyra Hotel ➤ London Hotel ➤ Amarilia (Faliro - Glyfada area) Metropolitan Expo: 18.30 and 10.00 Tuesday 5/6 to Thursday 7/6 Departures from Coral Hotel: Petropolitan Expo: 18.30 and 10.00 Route 3 Coral Hotel ➤ Emmantina Hotel ➤ Amarilia (Faliro - Glyfada area) Metropolitan Expo: 18.30 and 19.10 Palmyra Hotel ➤ London Hotel ➤ Amarilia (Faliro - Glyfada area) Metropolitan Expo: 18.30 and 19.10 Petropolitan Expo: 18.30 and 19.10 Petropolitan Expo: 18.30 and 10.00 Route 4 OLP Exhibition Centre ➤ Marriott Hotel ➤ Intercontinental Hotel ➤ Avenue Hotel ➤ Hilton ➤ President ➤ Metropolitan Expo: 18.30 and 19.10 President ➤ Metropolitan Expo: 18.30 and 19.10 Pepartures from OLP Ehibition Centre: 09.00 and 10.00 Route 5 Departures from OLP Ehibition Centre: 09.00 and 10.00 Route 5 Departures from OLP Ehibition Centre: 09.00 and 10.00 Route 5 Departures from OLP Ehibition Centre: 09.00 and 10.00 Route 5 Departures from OLP Ehibition Centre: 09.00 and 10.00 Route 5 Departures from OLP Ehibition Centre: 09.00 and 10.00 Route 5 Departures from OLP Ehibition Centre: 09.00 and 10.00 Route 5 Departures from OLP Ehibition Centre: 09.00 and 10.00 Route 5 Departures from Dole Attica Riviera Hotel: 09.00 Route 6 Departures from Dole Attica Riviera Hotel: 09.00 Departures from Dole Attica Riviera Hotel: 09.00 Departures from Dole Attica Riviera Hotel: 09.00		Roundtrips throughout the day	from 07.45 to 20.15	
Route 2 Syntagma Square (Syntagma sq. & Mitropoleos str. corner) ► Metropolitan Expo Departures from Syntagma Square: Return from Metropolitan Expo: Route 3 Coral Hotel ► Emmantina Hotel ► Palmyra Hotel ► London Hotel ► Pamyra Hotel ► London Hotel ► Amarilia (Faliro - Glyada area) ► Metropolitan Expo: Return from Metropolitan Expo: Route 3 Coral Hotel ► Emmantina Hotel ► Palmyra Hotel ► London Hotel ► Pamyra Hotel ► Return from Metropolitan Expo: Route 4 Departures from Coral Hotel: Return from Metropolitan Expo: Route 4 Departures from Coral Hotel: Return from Metropolitan Expo: Route 4 Departures from Coral Hotel: Return from Metropolitan Expo: Route 4 Departures from Coral Hotel: Return from Metropolitan Expo: Route 4 Departures from Coral Hotel: Return from Metropolitan Expo: Route 4 Departures from Coral Hotel: Return from Metropolitan Expo: Route 5 Departures from OLP Ehibition Centre: Return from Metropolitan Expo:	Monday 4/6	Roundtrips throughout the day	from 11.00 to 21.00	
Route 2 Syntagma Square (Syntagma sq. & Mitropoleos str. corner) Metropolitan Expo Departures from Syntagma Square: Return from Metropolitan Expo: 18.30, 19.00 and 10.00 18.30, 17.00 and 17.15 Route 3 Coral Hotel > Emmantina Hotel > Palmyra Hotel >	Tuesday 5/6 to Thursday 7/6	Roundtrips throughout the day	from 10.00 to 19.30	
Route 2 Syntagma Square (Syntagma sq. & Mitropoleos str. corner) Metropolitan Expo Departures from Syntagma Square: Return from Metropolitan Expo: Route 3 Coral Hotel > Emmantina Hotel > Palmyra Hotel > London Hotel > London Hotel > Palmyra Hotel > London Hotel + London Hotel > London Hotel + London Hotel	Friday 8/6	Roundtrips throughout the day	from 10.00 to 18.00	
Tuesday 5/6 to Thursday 7/6 Departures from Syntagma Square: Return from Metropolitan Expo: Departures from Syntagma Square: Return from Metropolitan Expo: Departures from Syntagma Square: Return from Metropolitan Expo: Sponsored by ROUTE 3 Coral Hotel ➤ Emmantina Hotel ➤ Palmyra Hotel ➤ London Hotel ➤ Amarilia (Faliro - Glyfada area) ➤ Metropolitan Expo: Departures from Coral Hotel: Return from Metropolitan Expo: Route 4 Departures from Coral Hotel: Return from Metropolitan Expo: Sponsored by ROUTE 4 Departures from Coral Hotel: Petropolitan Expo: Sponsored by ROUTE 4 Departures from Coral Hotel: Petropolitan Expo: Sponsored by ROUTE 4 Departures from Coral Hotel: Petropolitan Expo: Sponsored by ROUTE 4 Departures from Coral Hotel: Petropolitan Expo: Sponsored by ROUTE 4 Departures from Coral Hotel: Petropolitan Expo: Sponsored by ROUTE 4 Departures from Coral Hotel: Petropolitan Expo: Sponsored by ROUTE 5 Departures from OLP Ehibition Centre: Sponsored by Departur		Sponsored by	ERNATIONAL MARITIME INDUSTRIE PRIESD PT SUBJ BARKO (LOPHILL) BANIJI	
Return from Metropolitan Expo: 18.30 , 19.00 and 19.15	Route 2			
Route 3 Coral Hotel ▶ Emmantina Hotel ▶ Palmyra Hotel ▶ London Hotel ▶ Amarilia (Faliro - Glyfada area) ▶ Metropolitan Expo Tuesday 5/6 to Thursday 7/6 Pepartures from Coral Hotel: Return from Metropolitan Expo: 18.30 and 19.10 Priday 8/6 Polar Exhibition Centre ▶ Marriott Hotel ▶ Intercontinental Hotel ▶ Avenue Hotel ▶ Hilton ▶ President ▶ Metropolitan Expo: Tuesday 5/6 to Thursday 7/6 Route 4 □ OLP Exhibition Centre ▶ Marriott Hotel ▶ Intercontinental Hotel ▶ Avenue Hotel ▶ Hilton ▶ President ▶ Metropolitan Expo: Tuesday 5/6 to Thursday 7/6 Pepartures from OLP Ehibition Centre: Return from Metropolitan Expo: Tuesday 5/6 to Thursday 7/6 Pepartures from OLP Ehibition Centre: Return from Metropolitan Expo: Departures from OLP Exhibition Centre: Return from Metropolitan Expo: Departures from OLP Exhibition Centre: Return from Metropolitan Expo: Departures from OLP Exhibition Centre: Return from Metropolitan Expo: Departures from OLP Exhibition Centre: Return from Metropolitan Expo: Dolce Attica Riviera ➤ Ramada Attica ▶ Metropolitan Expo: Departures from Dolce Attica Riviera Hotel: 99.00 16.30 and 17.15 Polar Exhibition Expo: Departures from Dolce Attica Riviera Hotel: 99.00 16.30 and 19.10 Pepartures from Dolce Attica Riviera Hotel: 99.00 16.30 and 19.10	Tuesday 5/6 to Thursday 7/6			
Route 3 Coral Hotel > Emmantina Hotel > Palmyra Hotel > Palmyra Hotel > London Hotel > Amarilia (Faliro - Glyfada area) > Metropolitan Expo Tuesday 5/6 to Thursday 7/6 Pepartures from Coral Hotel: 09.00 and 10.00 18.30 and 19.10 Friday 8/6 Pepartures from Coral Hotel: 09.00 and 10.00 16.30 and 17.15 President > Metropolitan Expo: 16.30 and 17.15 President > Metropolitan Expo: 16.30 and 17.15 Tuesday 5/6 to Thursday 7/6 Pepartures from OLP Ehibition Centre: 09.00 and 10.00 18.30 and 19.10 Friday 8/6 Pepartures from OLP Ehibition Centre: 09.00 and 10.00 18.30 and 19.10 Friday 8/6 Pepartures from OLP Ehibition Centre: 09.00 and 10.00 16.30 and 17.15 Route 5 Dolce Attica Riviera > Ramada Attica > Metropolitan Expo: 16.30 and 17.15 Police Attica Riviera > Ramada Attica > Metropolitan Expo: 19.00 19.10 Priday 8/6 Pepartures from Dolce Attica Riviera Hotel: 09.00 19.10 Friday 8/6 Pepartures from Dolce Attica Riviera Hotel: 09.00 19.10 Priday 8/6 Pepartures from Dolce Attica Riviera Hotel: 09.00 19.10 Priday 8/6 Pepartures from Dolce Attica Riviera Hotel: 09.00 19.10	Friday 8/6	Return from Metropolitan Expo:		
Return from Metropolitan Expo: 18.30 and 19.10 Pepartures from Coral Hotel: 09.00 and 10.00 16.30 and 17.15 Route 4 ■ OLP Exhibition Centre ➤ Marriott Hotel ➤ Intercontinental Hotel ➤ Avenue Hotel ➤ Hilton ➤ President ➤ Metropolitan Expo Tuesday 5/6 to Thursday 7/6 Departures from OLP Ehibition Centre: 09.00 and 10.00 18.30 and 19.10 Friday 8/6 Departures from OLP Ehibition Centre: 09.00 and 10.00 18.30 and 19.10 Friday 8/6 Departures from OLP Ehibition Centre: 09.00 and 10.00 16.30 and 17.15 Route 5 ■ Dolce Attica Riviera ➤ Ramada Attica ➤ Metropolitan Expo Tuesday 5/6 to Thursday 7/6 Departures from Dolce Attica Riviera Hotel: 09.00 19.10 Friday 8/6 Departures from Dolce Attica Riviera Hotel: 09.00 19.10 Friday 8/6 Departures from Dolce Attica Riviera Hotel: 09.00 19.10		▶ Palmyra Hotel ▶ London Hote	اد)	
Return from Metropolitan Expo: 16.30 and 17.15 Route 4 ■ OLP Exhibition Centre ➤ Marriott Hotel ➤ Intercontinental Hotel ➤ Avenue Hotel ➤ Hilton ➤ President ➤ Metropolitan Expo Tuesday 5/6 to Thursday 7/6 Departures from OLP Ehibition Centre: 09.00 and 10.00 Return from Metropolitan Expo: 18.30 and 19.10 Friday 8/6 Departures from OLP Ehibition Centre: 09.00 and 10.00 Return from Metropolitan Expo: 16.30 and 17.15 Route 5 ■ Dolce Attica Riviera ➤ Ramada Attica ➤ Metropolitan Expo Tuesday 5/6 to Thursday 7/6 Departures from Dolce Attica Riviera Hotel: 09.00 Return from Metropolitan Expo: 19.10 Friday 8/6 Departures from Dolce Attica Riviera Hotel: 09.00			•	
President ➤ Metropolitan Expo Tuesday 5/6 to Thursday 7/6 Departures from OLP Ehibition Centre: 09.00 and 10.00 18.30 and 19.10 Priday 8/6 Departures from OLP Ehibition Centre: 09.00 and 10.00 18.30 and 19.10 Priday 8/6 Departures from OLP Ehibition Centre: 09.00 and 10.00 16.30 and 17.15 Dolce Attica Riviera ➤ Ramada Attica ➤ Metropolitan Expo Tuesday 5/6 to Thursday 7/6 Departures from Dolce Attica Riviera Hotel: 09.00 19.10 Priday 8/6 Departures from Dolce Attica Riviera Hotel: 09.00 Return from Metropolitan Expo: 19.10	Tuesday 5/6 to Thursday 7/6	► Metropolitan Expo Departures from Coral Hotel:	09.00 and 10.00	
Return from Metropolitan Expo: 18.30 and 19.10 Priday 8/6 Departures from OLP Ehibition Centre: 09.00 and 10.00 16.30 and 17.15 Route 5 Dolce Attica Riviera ➤ Ramada Attica ➤ Metropolitan Expo Tuesday 5/6 to Thursday 7/6 Departures from Dolce Attica Riviera Hotel: 09.00 Return from Metropolitan Expo: 19.10 Priday 8/6 Departures from Dolce Attica Riviera Hotel: 09.00 Return from Metropolitan Expo: 19.10		Departures from Coral Hotel: Return from Metropolitan Expo: Departures from Coral Hotel: Return from Metropolitan Expo:	09.00 and 10.00 18.30 and 19.10 09.00 and 10.00	
Return from Metropolitan Expo: 16.30 and 17.15 Route 5 ■ Dolce Attica Riviera ➤ Ramada Attica ➤ ➤ Metropolitan Expo Tuesday 5/6 to Thursday 7/6 Departures from Dolce Attica Riviera Hotel: 09.00 Return from Metropolitan Expo: 19.10 Friday 8/6 Departures from Dolce Attica Riviera Hotel: 09.00	Friday 8/6	Departures from Coral Hotel: Return from Metropolitan Expo: Departures from Coral Hotel: Return from Metropolitan Expo: Sponsored by ■ OLP Exhibition Centre ➤ Marr ➤ Intercontinental Hotel ➤ Ave	09.00 and 10.00 18.30 and 19.10 09.00 and 10.00 16.30 and 17.15	
Tuesday 5/6 to Thursday 7/6 Departures from Dolce Attica Riviera Hotel: 09.00 Return from Metropolitan Expo: 19.10 Friday 8/6 Departures from Dolce Attica Riviera Hotel: 09.00	Friday 8/6 Route 4	Departures from Coral Hotel: Return from Metropolitan Expo: Departures from Coral Hotel: Return from Metropolitan Expo: Sponsored by ■ OLP Exhibition Centre ➤ Marr ➤ Intercontinental Hotel ➤ Avei ➤ President ➤ Metropolitan Exp Departures from OLP Ehibition Centre:	09.00 and 10.00 18.30 and 19.10 09.00 and 10.00 16.30 and 17.15 riott Hotel > nue Hotel > Hilton > 09.00 and 10.00	
Return from Metropolitan Expo: 19.10 Friday 8/6 Departures from Dolce Attica Riviera Hotel: 09.00	Friday 8/6 Route 4 Tuesday 5/6 to Thursday 7/6	Departures from Coral Hotel: Return from Metropolitan Expo: Departures from Coral Hotel: Return from Metropolitan Expo: Sponsored by ■ OLP Exhibition Centre ➤ Marr Intercontinental Hotel ➤ Aver President ➤ Metropolitan Exp Departures from OLP Ehibition Centre: Return from Metropolitan Expo: Departures from OLP Ehibition Centre:	09.00 and 10.00 18.30 and 19.10 09.00 and 10.00 16.30 and 17.15 riott Hotel > hilton > 00 09.00 and 10.00 18.30 and 19.10 09.00 and 10.00	
	Friday 8/6 Route 4 Tuesday 5/6 to Thursday 7/6 Friday 8/6	Departures from Coral Hotel: Return from Metropolitan Expo: Departures from Coral Hotel: Return from Metropolitan Expo: Sponsored by □ OLP Exhibition Centre ➤ Marr ➤ Intercontinental Hotel ➤ Ave ➤ President ➤ Metropolitan Expo: Departures from OLP Ehibition Centre: Return from Metropolitan Expo: Departures from OLP Ehibition Centre: Return from Metropolitan Expo: □ Dolce Attica Riviera ➤ Ramado	09.00 and 10.00 18.30 and 19.10 09.00 and 10.00 16.30 and 17.15 riott Hotel > nue Hotel > Hilton > 00 09.00 and 10.00 18.30 and 19.10 09.00 and 10.00 16.30 and 17.15	
	Route 4 Tuesday 5/6 to Thursday 7/6 Friday 8/6 Route 5	Departures from Coral Hotel: Return from Metropolitan Expo: Departures from Coral Hotel: Return from Metropolitan Expo: Sponsored by ■ OLP Exhibition Centre ➤ Marr ➤ Intercontinental Hotel ➤ Aver ➤ President ➤ Metropolitan Expo: Departures from OLP Ehibition Centre: Return from Metropolitan Expo: Departures from OLP Ehibition Centre: Return from Metropolitan Expo: ■ Dolce Attica Riviera ➤ Ramad. ➤ Metropolitan Expo Departures from Dolce Attica Riviera Hotel:	09.00 and 10.00 18.30 and 19.10 09.00 and 10.00 16.30 and 17.15 riott Hotel > nue Hotel > Hilton > 09.00 and 10.00 18.30 and 19.10 09.00 and 10.00 16.30 and 17.15 a Attica >	

Winners step up at 19th hole



For many there was no better way to tee-off Posidonia than enjoy a round or two of golf. Some 124 players from Europe, Asia and the US got into the swing of things at the serene green course of the Glyfada Golf Club for the 18-hole Posidonia Golf Tournament.

The event is sponsored by

Costamare and Thenamaris, Nikolas Martinos, ceo of Thenamaris said "the tournament provides a great opportunity for Posidonia guests to enjoy a day out with shipping colleagues from around the world".

And judging from the photo, perhaps better than playing a round was winning the prizes presented at the popular Island night spot venue.





Published by Seatrade / Naftiliaki

Editorial team: David Glass, Bob Jaques,

Marcus Hand

Production editor:

Sophia Sofikiti

Advertising sales: Marie Gresham, Natassa Vassilaki

Design:

Gemma Crayston

Printer:

PaperGraph SA

OFFICE DETAILS:

Naftiliaki

132 Syngrou Avenue, 117 45 Athens, Greece Tel: +30 210 9214205 Fax: +30 210 9214675

E-mail: amaroid@otenet.gr

Seatrade UBM EMEA

42 North Station Road Colchester CO1 1RB, UK Tel: +44 1206 545121

Fax: +44 1206 545190 E-mail: seatradeeditorial@ubm.com